JUNE 2015

A DATA BOOK

Health Care Spending and the Medicare Program

MEDPAC Medicare Payment Advisory Commission

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Introduction

The MedPAC Data Book provides information on national health care and Medicare spending as well as Medicare beneficiary demographics, dual-eligible beneficiaries, quality of care in the Medicare program, and Medicare beneficiary and other payer liability. It also examines provider settings—such as hospitals and post-acute care—and presents data on Medicare spending, beneficiaries' access to care in the setting (measured by the number of beneficiaries using the service, number of providers, volume of services, length of stay, or through direct surveys), and the sector's Medicare profit margins, if applicable. In addition, it covers the Medicare Advantage program and prescription drug coverage for Medicare beneficiaries, including Part D.

MedPAC began producing its annual Data Book at the suggestion of congressional staff. Some of the information it contains is derived from MedPAC's March and June reports to the Congress; other information presented is unique to the Data Book. The information is presented through tables and figures with brief discussions.

We produce a limited number of printed copies of this report. It is, however, available through the MedPAC website: www.medpac.gov.

Notes on data

Several charts in this Data Book use data from the Medicare Current Beneficiary Survey (MCBS). We use the MCBS to compare beneficiary groups with different characteristics. The MCBS is a survey, so expenditure amounts that we show may not match actual Medicare expenditure amounts from CMS's program offices or the Office of the Actuary.

A number of charts in the Data Book use information that is typically published in the annual report of the Boards of Trustees of the Medicare Trust Funds. At the time this Data Book was prepared, the trustees' report had not yet been released for 2015. Charts that use data from the trustees' report reflect data from the 2014 report and are flagged accordingly. The reader is advised to consult the 2015 trustees' report directly, when available, for the most current data.

Changes in aggregate spending among the fee-for-service sectors presented in this Data Book reflect changes in Medicare enrollment between the traditional fee-for-service program and Medicare Advantage. Increased enrollment in Medicare Advantage may be a significant factor in instances in which Medicare spending in a given sector has leveled off or even declined. In these instances, fee-for-service spending per capita may present a more complete picture of spending changes. We present both measures (aggregate and per capita) where warranted.

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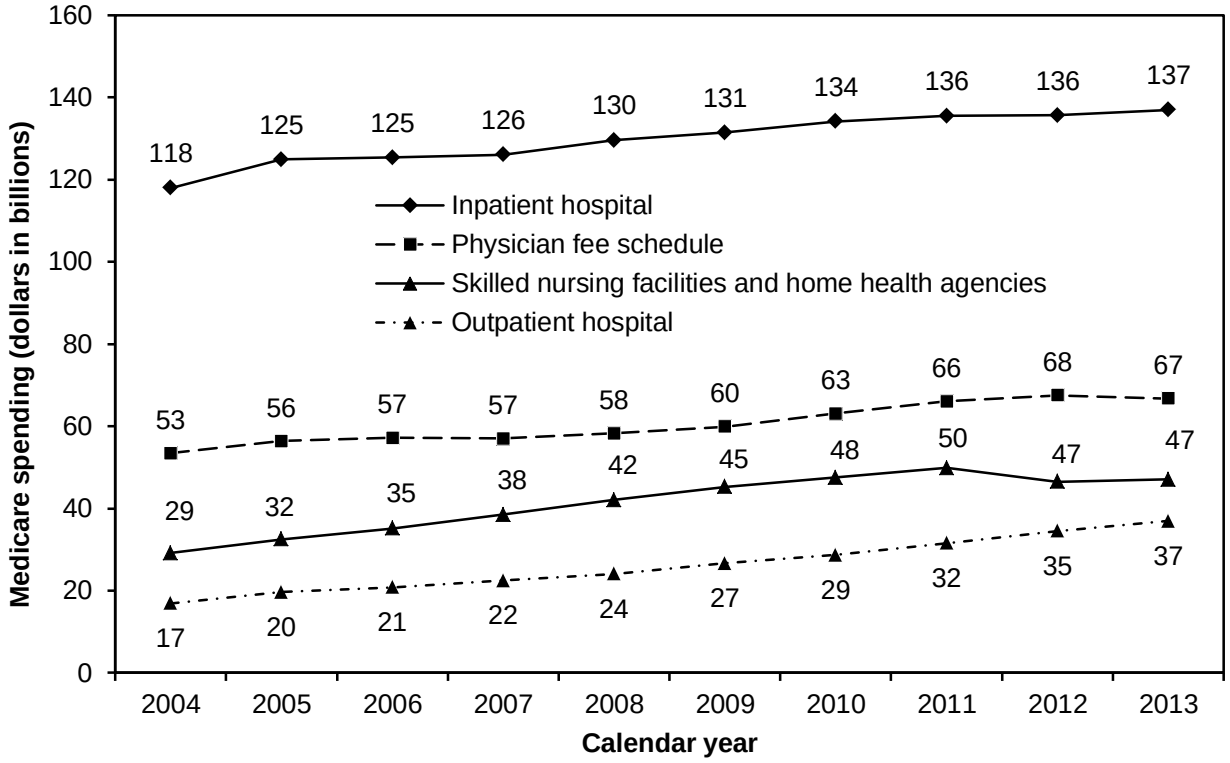
SECTION 1

National health care and Medicare spending

Chart 1-1. Aggregate Medicare spending among FFS beneficiaries, by sector, 2004–2013



Note: FFS (fee-for-service). "Physician fee schedule" includes spending on services provided by physicians and other health professionals such as nurse practitioners, physician assistants, and physical therapists. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. Spending for Medicare Advantage enrollees is also not included.

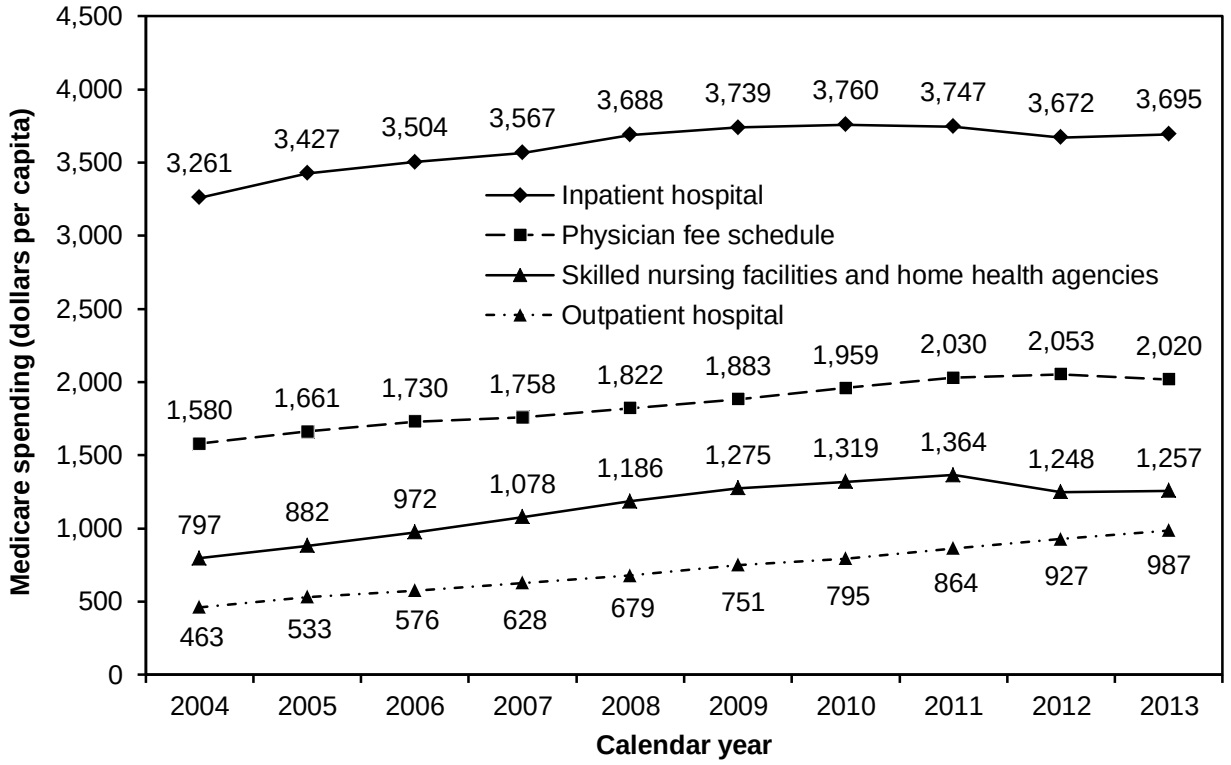
Source: CMS Office of the Actuary, based on the FY 2016 President's budget and on the annual report of the Boards of Trustees of the Medicare trust funds 2014.
AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.

- Medicare spending among FFS beneficiaries has increased significantly since 2004 across all sectors, even though spending growth has slowed recently. The slowdown in spending growth is partly attributable to a decline in the growth of FFS enrollment since the number of Medicare Advantage enrollees has increased.

- Spending growth for inpatient hospital services, the sector with the highest level of spending, averaged 2 percent per year from 2004 to 2010. It declined to about 1 percent per year from 2010 to 2013. The decline in the last three years is partly attributable to a shift in service volume from the inpatient setting to the outpatient setting and to the decline in the growth of FFS enrollment, but it may also reflect broader economic conditions. Despite the slowdown, spending on inpatient hospital services increased, on aggregate, 16 percent from 2004 to 2013.

- Spending growth for outpatient hospital services remained strong throughout the period, averaging 10 percent per year from 2004 to 2007 and 9 percent per year from 2007 to 2013. Aggregate spending on outpatient hospital services increased 118 percent from 2004 to 2013.

Chart 1-2. Per capita Medicare spending among FFS beneficiaries, by sector, 2004–2013



Note: FFS (fee-for-service). "Physician fee schedule" includes spending on services provided by physicians and other health professionals such as nurse practitioners, physician assistants, and physical therapists. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. Spending for Medicare Advantage enrollees is also not included. Spending per beneficiary for inpatient hospital services equals spending for the sector (see Chart 1-1) divided by FFS enrollment in Part A. Spending per beneficiary for physician fee schedule services and outpatient hospital services equals spending for the sector (see Chart 1-1) divided by FFS enrollment in Part B. Spending per beneficiary for skilled nursing facilities and home health agencies equals spending for those sectors (see Chart 1-1) divided by total FFS enrollment.

Source: CMS Office of the Actuary, based on the FY 2016 President's budget and the annual report of the Boards of Trustees of the Medicare trust funds 2014.
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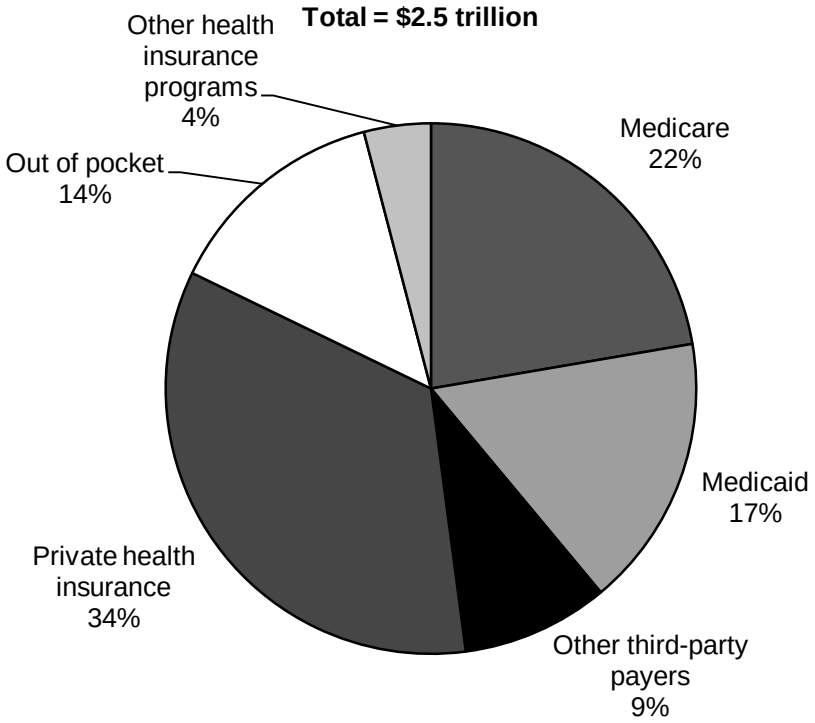
- Medicare spending per beneficiary in FFS Medicare has increased substantially since 2004 across all sectors, despite slowing down recently.

- Growth in spending per beneficiary for inpatient hospital services, the sector with the highest level of spending, averaged 3 percent per year from 2004 to 2007 and 2 percent per year from 2007 to 2010. It declined to about –1 percent per year from 2010 to 2013. Despite the slowdown in the last three years, spending per beneficiary for inpatient hospital services increased, on aggregate, 13 percent from 2004 to 2013.

- Growth in spending per beneficiary for outpatient hospital services remained strong throughout the period, averaging 11 percent per year from 2004 to 2007, 8 percent per year from 2007 to 2010, and 7 percent per year from 2010 to 2013. Spending per beneficiary for outpatient hospital services increased, on aggregate, 113 percent from 2004 to 2013.

Chart 1-3. Medicare is the largest single purchaser of personal health care, 2013



Note: "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. "Out-of-pocket spending" includes cost sharing for both privately and publicly insured individuals. Premiums are included in the shares of each program (e.g., Medicare, private health insurance) rather than in the share of the out-of-pocket category. "Other health insurance programs" includes the Children's Health Insurance Program, Department of Defense, and Department of Veterans' Affairs. "Other third-party payers" includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs, Substance Abuse and Mental Health Services Administration, other state and local programs, and school health.

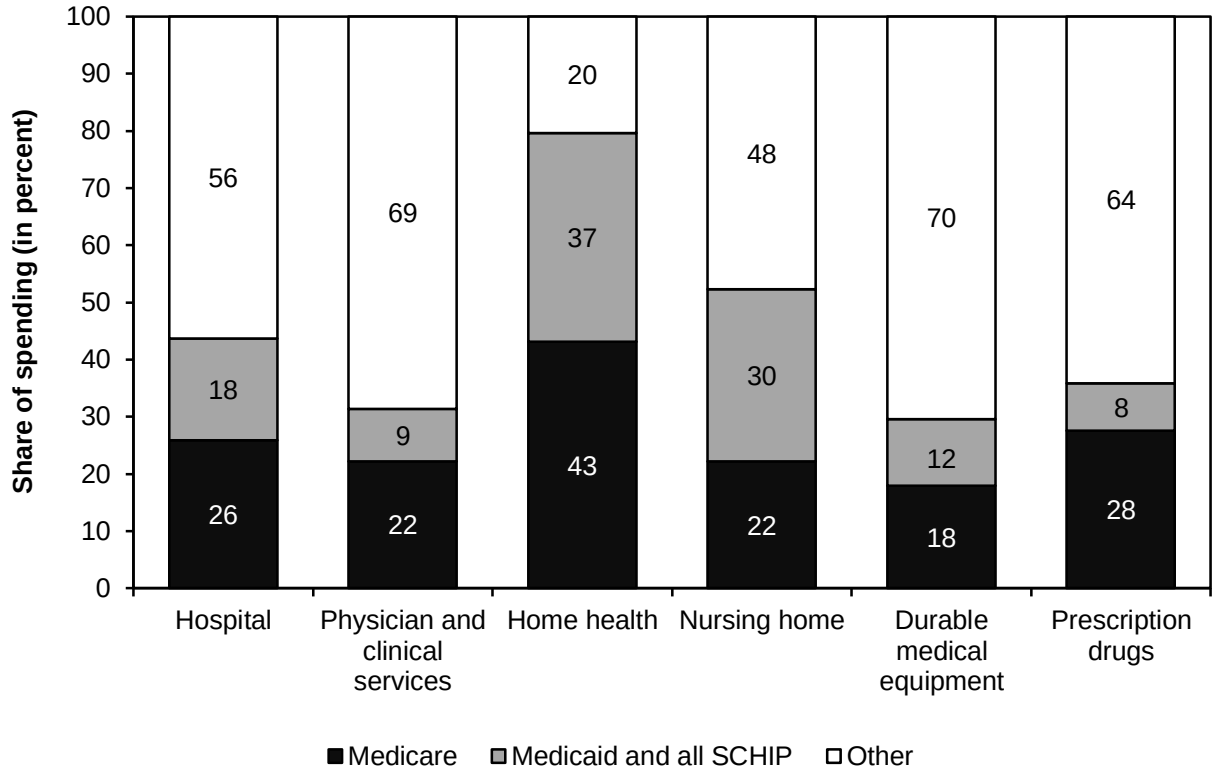
Source: CMS Office of the Actuary, National Health Expenditure Accounts, "Table 6: Personal Health Care Expenditures; Levels, Percent Change and Percent Distribution, by Source of Funds: Selected Calendar Years 1970–2013," released January 2015.

- Medicare is the largest single purchaser of health care in the United States. (The share of spending accounted for by private health insurance (34 percent in 2013) is greater than Medicare's share (22 percent in 2013). However, private health insurance is not a single purchaser of health care; rather, it includes many private plans, including traditional managed care, self-insured health plans, and indemnity plans.) Of the $2.5 trillion spent on personal health care in 2013, Medicare accounted for 22 percent, or $551 billion (as noted above, this amount includes spending on direct patient care and excludes certain administrative and business costs).

- Thirty-four percent of spending was financed through private health insurance payers, and 14 percent was from consumer out-of-pocket spending.

- Medicare and private health insurance spending include premium contributions from enrollees.

Chart 1-4. Medicare's share of spending on personal health care varies by type of service, 2013



Note: SCHIP (State Children's Health Insurance Program). "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. "Other" includes private health insurance, out-of-pocket spending, and other private and public spending.

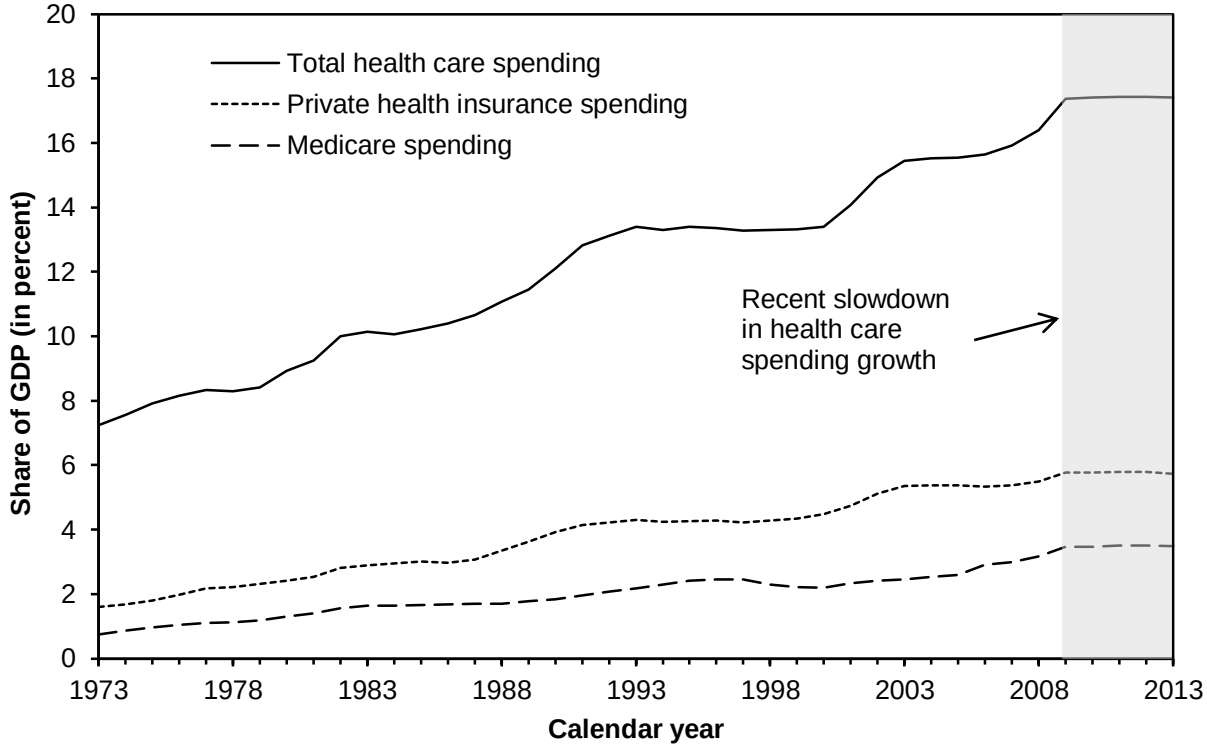
Source: CMS Office of the Actuary, National Health Expenditure Accounts, "Table 19: National Health Expenditures by Type of Expenditure and Program: Calendar Year 2013," released January 2015.

- While Medicare's share of total personal health care spending was 22 percent in 2013, its share of spending by type of service varied, with a slightly higher share of spending on hospital care (26 percent) and a much higher share of spending on home health services (43 percent), partly because that category, in the chart above, includes hospice services.

- Medicare's share of spending on nursing homes was smaller than Medicaid's share because Medicare pays for nursing home services only for Medicare beneficiaries who require skilled nursing or rehabilitation services, whereas Medicaid pays for custodial care (assistance with activities of daily living) provided in nursing homes for people with limited income and assets.

- In 2013, Medicare accounted for 26 percent of spending on hospital care, 22 percent of physician and clinical services, 43 percent of home health services, 22 percent of nursing home care, 18 percent of durable medical equipment, and 28 percent of prescription drugs.

Chart 1-5. Historically, health care spending has risen as a share of GDP; recently, its growth has slowed



Note: GDP (gross domestic product).

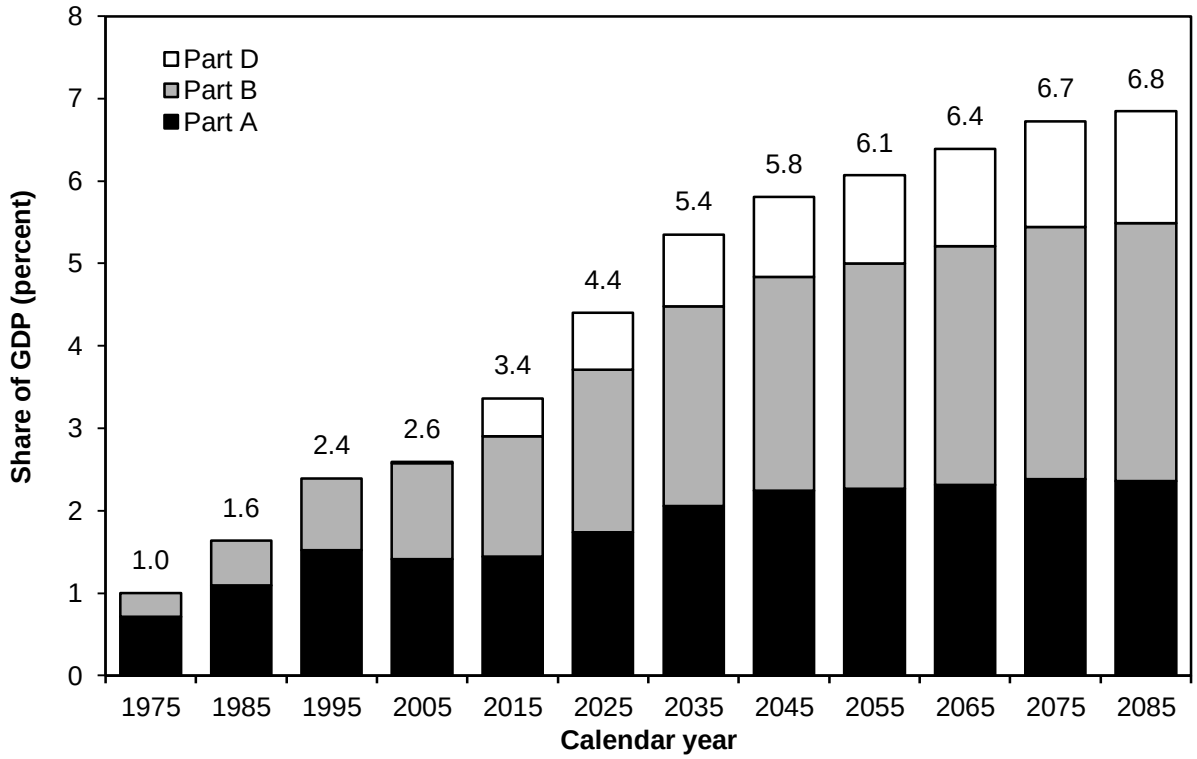
Source: CMS Office of the Actuary, National Health Expenditure Accounts 2015.

- Historically, health care spending has risen as a share of GDP, but recently its growth rate has slowed. That general trend is true for health care spending by private sector payers as well as by Medicare.

- As a share of GDP, total health care spending more than doubled from 1973 to 2013, increasing from 7.2 percent to 17.4 percent. As a share of GDP, private health insurance spending more than tripled over that same time period, increasing from 1.6 percent to 5.7 percent. As a share of GDP, Medicare spending went up by almost a factor of five, increasing from 0.8 percent to 3.5 percent.

- However, as seen in the chart above, health care spending as a share of GDP has remained relatively constant since 2009.

Chart 1-6. Trustees project Medicare spending to continue to increase as a share of GDP



Note: GDP (gross domestic product). Shares for year 2015 and later are projections and based on the trustees' intermediate set of assumptions.

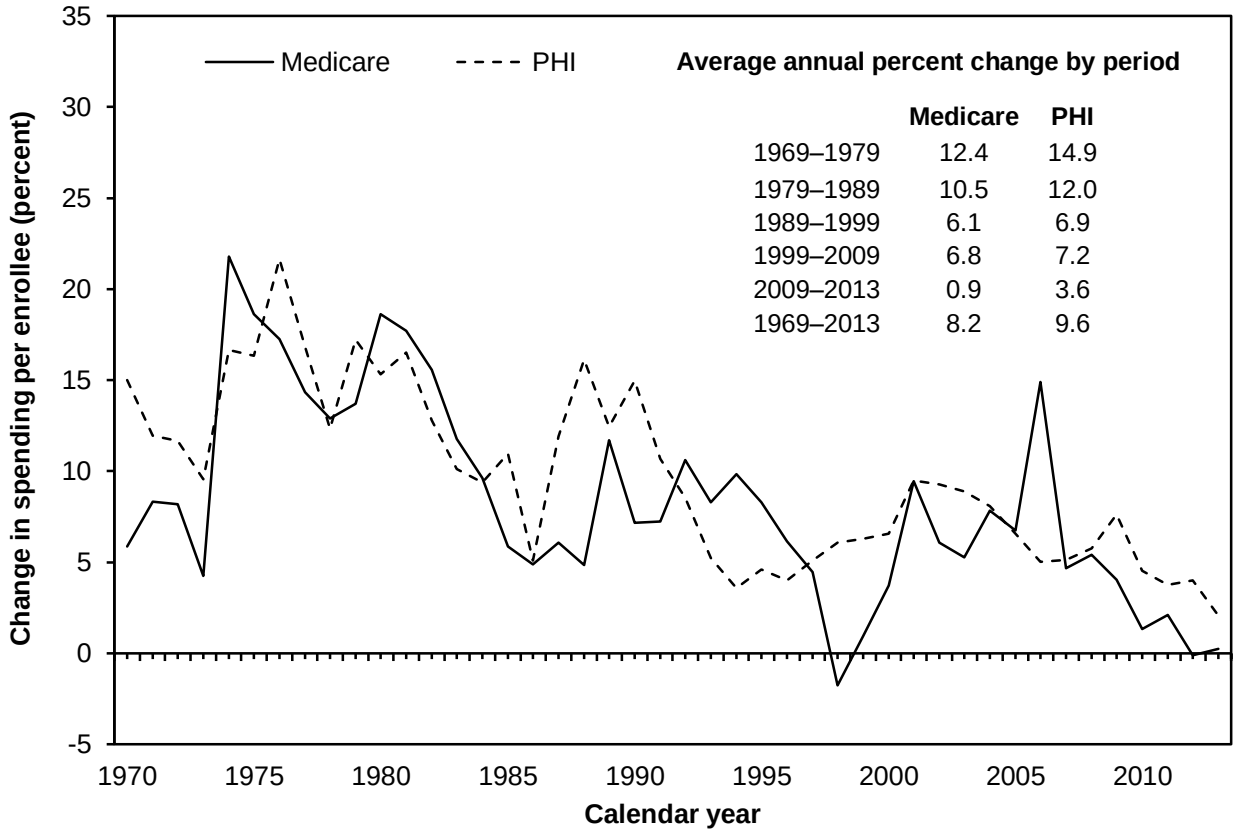
Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- Over time, Medicare spending has accounted for an increasing share of GDP. From 1 percent in 1975, it is projected to reach 6.8 percent of GDP in 2085.

- The Medicare trustees project that spending will rise from 3.4 percent of GDP in 2015 to 5.4 percent of GDP by 2035, largely because of the rapid growth in the number of beneficiaries, and then to 6.8 percent of GDP in 2085, with growth in spending per beneficiary becoming the larger factor in later years of the forecast. The rapid growth in the number of beneficiaries began in 2011 and will continue through 2030 as members of the baby-boom generation reach age 65 and become eligible to receive benefits.

- Medicare spending is projected to continue rising as a share of GDP, but at a slower pace than in the past. Nominal Medicare spending grew on average 9.8 percent per year over the period from 1975 to 2013, considerably faster than nominal growth in the economy, which averaged 6.2 percent per year over the same time frame. Future Medicare spending is projected to continue growing faster than GDP, averaging 5.5 percent per year between 2013 and 2085 compared with an annual average growth rate of 4.5 percent for the economy as a whole.

Chart 1-7. Changes in spending per enrollee, Medicare and private health insurance



Note: PHI (private health insurance). Medicare expenditures include both fee-for-service and private plans.

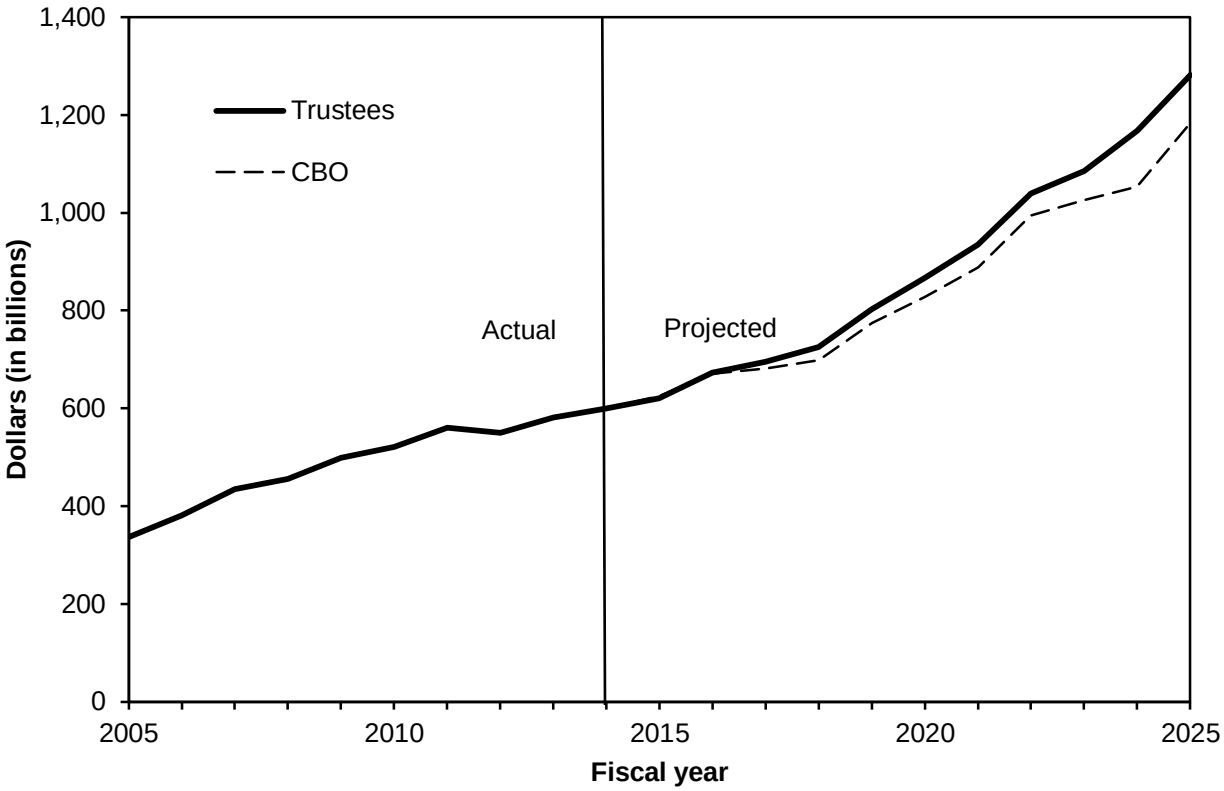
Source: CMS Office of the Actuary, National Health Expenditure Accounts 2015.

- Rates of growth in per capita spending for Medicare and private health insurance have followed a similar pattern over the last four decades. Recently, rates of growth in per capita spending have slowed for both Medicare and private health insurance.

- Differences between the rates of growth do appear to be more pronounced since the mid-1980s. Some analysts believe that those differences are attributable to the introduction of the prospective payment system for hospital inpatient services that began in 1985. In their view, that payment system has allowed Medicare greater success than private payers in containing spending growth. Others maintain that the differences are due to the expansion of benefits offered by private insurers and to a decline in cost-sharing requirements. More recently, cost-sharing requirements have increased, coinciding with a decline in the growth of per capita spending for private payers.

- Comparisons are problematic since private insurers and Medicare do not buy the same mix of services, and Medicare covers an older population, which tends to be more costly. In addition, spending trends are also affected by changes in the generosity of covered benefits and changes in enrollees' out-of-pocket spending.

Chart 1-8. Trustees and CBO project Medicare spending to exceed $1 trillion by the early part of the next decade



Note: CBO (Congressional Budget Office). All data are nominal, mandatory outlays (benefit payments plus mandatory administrative expenses) by fiscal year.

Source: CBO 2014 Baseline; the annual report of the Boards of Trustees of the Medicare trust funds 2014.
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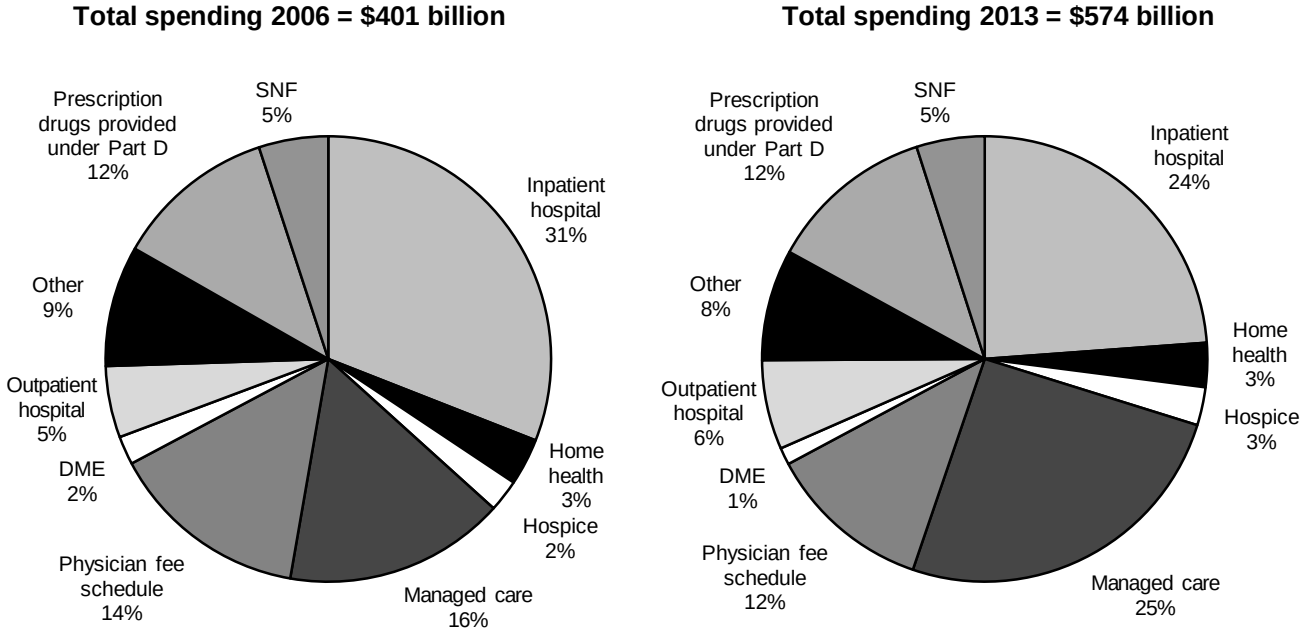
- Medicare spending has nearly doubled since 2005, increasing from $337 billion to $600 billion by 2014 (these data are by fiscal year and include benefit payments and mandatory administrative expenses).
- The Medicare trustees and CBO project that spending for Medicare between 2014 and 2025 will grow at an average annual rate of 7.1 percent and 6.4 percent, respectively. Medicare spending will reach $1 trillion in 2022 under the trustees' projections, and in 2023 under the CBO's projections.
- Forecasts of future Medicare spending are inherently uncertain, and differences can stem from different assumptions about the economy (which affect annual updates to provider payments) and about growth in the volume and intensity of services delivered to Medicare beneficiaries, among other factors.

Chart 1-9. Medicare spending is concentrated in certain services and has shifted over time

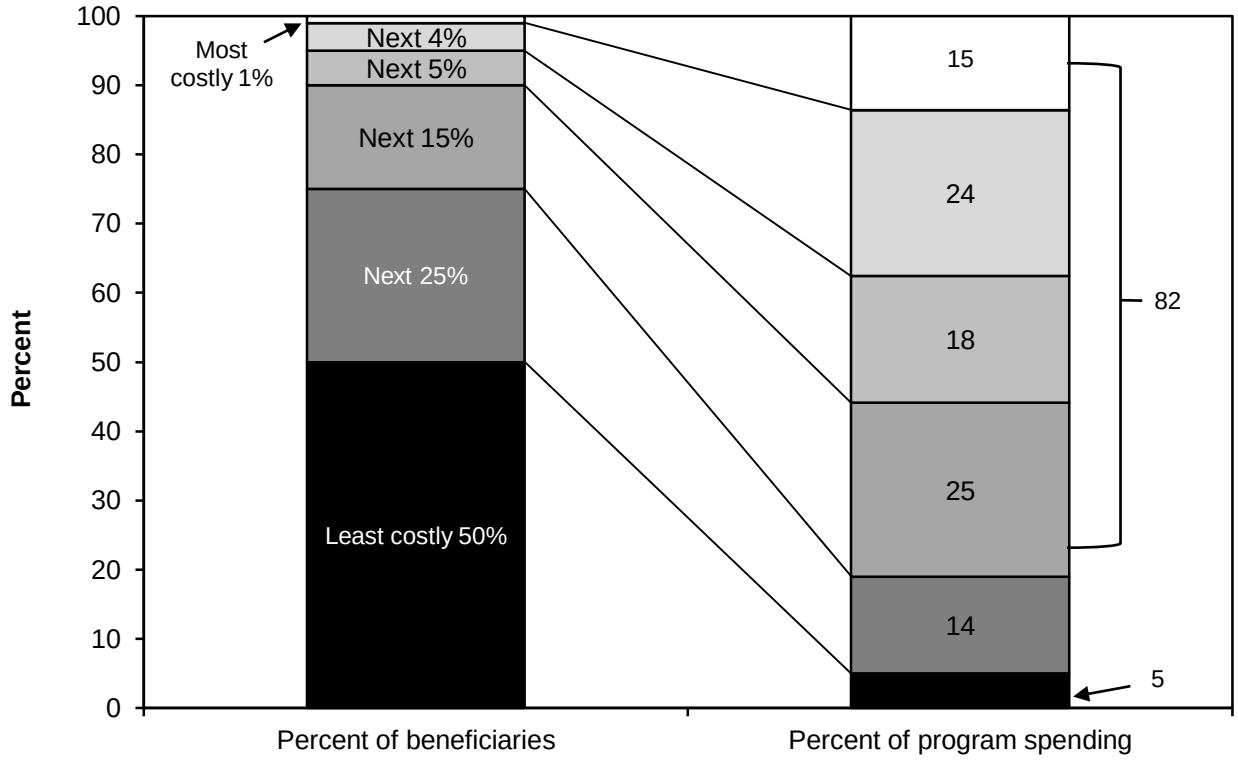


Note: SNF (skilled nursing facility), DME (durable medical equipment). All data are by calendar year. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. "Other" includes items such as laboratory services, physician-administered drugs, renal dialysis performed in freestanding dialysis facilities, services provided in freestanding ambulatory surgical center facilities, and ambulance. Totals may not sum to 100 percent due to rounding.

Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- The distribution of Medicare spending among services has changed over time.
- In 2013, Medicare spending totaled $574 billion for benefit expenses. Managed care was the largest spending category (25 percent), followed by inpatient hospital services (24 percent), services reimbursed under the physician fee schedule (12 percent), outpatient prescription drugs provided under Part D (12 percent), and services provided in other settings (8 percent).
- Spending for inpatient hospital services was a smaller share of total Medicare spending in 2013 than it was in 2006, falling from 31 percent to 24 percent. Spending on beneficiaries enrolled in managed care plans grew from 16 percent to 25 percent over the same period. Medicare managed care enrollment increased 87 percent over the same period.

Chart 1-10. FFS program spending is highly concentrated in a small group of beneficiaries, 2011



Note: FFS (fee-for-service). All data are for calendar year 2011. Analysis excludes beneficiaries with any group health enrollment during the year. "Percent of program spending" total may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use files 2011.

- Medicare FFS spending is concentrated among a small number of beneficiaries. In 2011, the costliest 5 percent of beneficiaries accounted for 39 percent of annual Medicare FFS spending, and the costliest 25 percent accounted for 82 percent. By contrast, the least costly 50 percent of beneficiaries accounted for only 5 percent of FFS spending.

- Costly beneficiaries tend to include those who have multiple chronic conditions, are using inpatient hospital services, are dually eligible for Medicare and Medicaid, and are in the last year of life.

Chart 1-11. Medicare HI trust fund is projected to be insolvent in 2030 under trustees' intermediate assumptions

Estimate	Year costs exceed income	Year HI trust fund assets exhausted
High	2008	2021
Intermediate	2008	2030
Low	2008	Never*

Note: HI (Hospital Insurance). All years represent calendar years. The primary source of income for HI is the payroll tax on covered earnings. Other HI income sources include (a) a portion of the federal income taxes that Social Security recipients with incomes above certain thresholds pay on their benefits and (b) interest paid on the U.S. Treasury securities held in the HI trust fund.
*Under the low-cost assumption, trust fund assets would start to increase in 2015 and continue to increase throughout the projection period.

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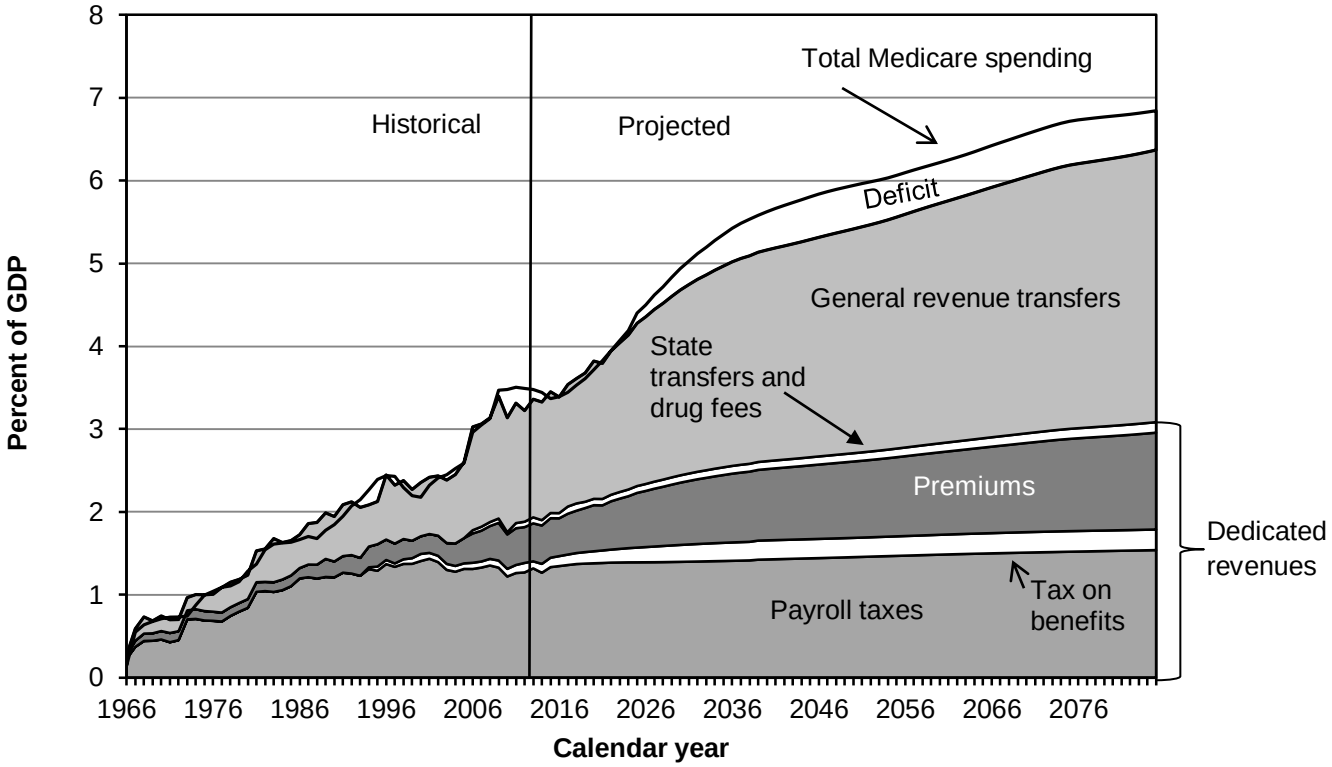
- The Hospital Insurance (HI) trust fund funds Part A, which helps pay for inpatient hospital stays and post-acute care such as skilled nursing facilities and hospice. Part A is funded through a dedicated payroll tax (i.e., a tax on wage earnings).

- Since 2008, the HI trust fund has run an annual deficit (i.e., paid more in benefits than it collects in payroll taxes). The trust fund still has interest income generated from loaning funds to other parts of the government during times of surplus, but those assets are projected to be exhausted by 2030 under the trustees' intermediate assumptions. Under high-cost assumptions, the HI trust fund could be exhausted as early as 2021. Under low-cost assumptions, it would remain able to pay full benefits indefinitely.

- The trustees estimate that the payroll tax would immediately need to be increased from its current rate of 2.9 percent to 3.8 percent to balance the HI trust fund over the next 75 years. Alternatively, Part A spending would immediately need to be reduced by 19 percent.

Chart 1-12. General revenue is paying for a growing share of Medicare spending



Note: GDP (gross domestic product). These projections are based on the trustees' intermediate set of assumptions. "Tax on benefits" refers to the portion of income taxes that higher income individuals pay on Social Security benefits, which is designated for Medicare. "State transfers" (often called the Part D "clawback") refers to payments called for within the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 from the states to Medicare for assuming primary responsibility for prescription drug spending. The drug fee is the fee imposed in the Patient Protection and Affordable Care Act of 2010 on manufacturers and importers of brand-name prescription drugs. These fees are deposited in the Part B account of the Supplementary Medical Insurance trust fund.

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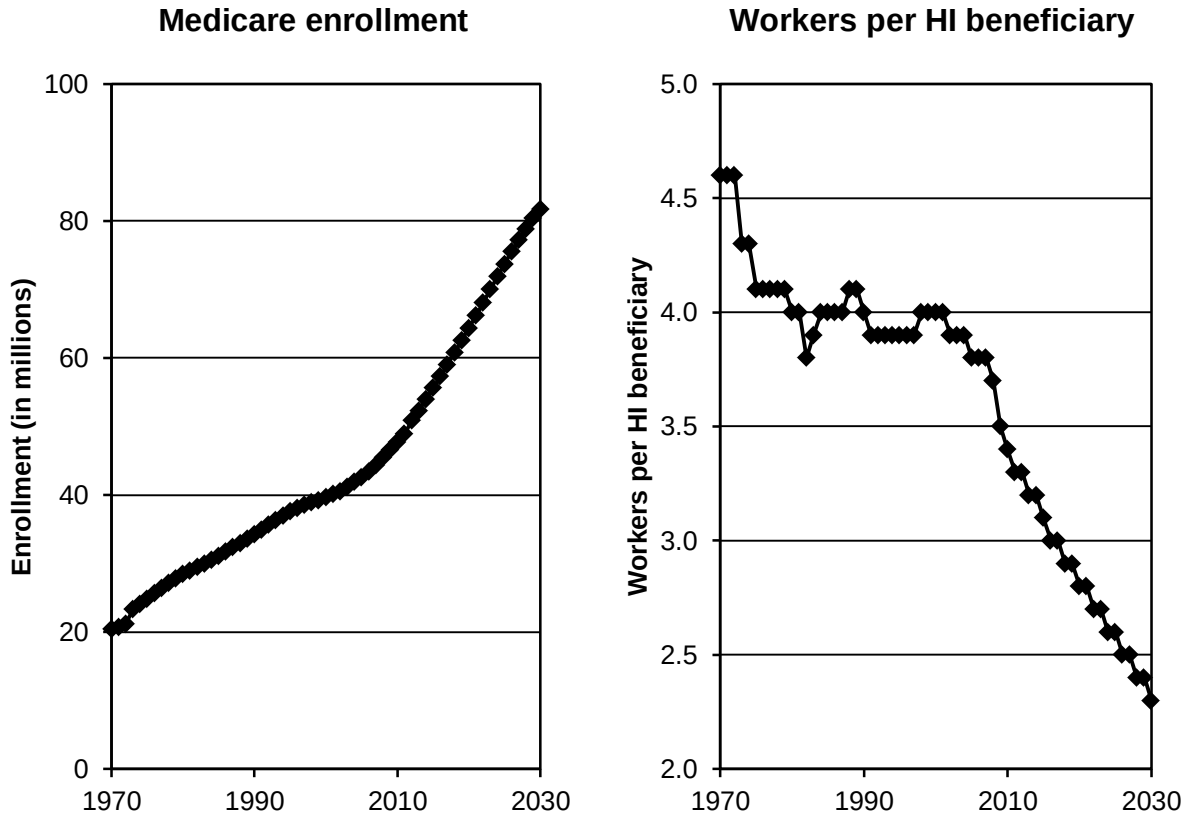
- The Medicare trustees project that Medicare's share of GDP will rise to 5.6 percent by 2040 and to 6.8 percent by 2085.
- As spending grows, financing from general revenues will grow as a share of total Medicare spending (from 41 percent of spending today to 45 percent of spending in about 15 years).
- As Medicare becomes more dependent on general revenues, fewer resources will be available to invest in growing the economic output of the future or in other national priorities.

Chart 1-13. Medicare enrollment is rising while the number of workers per HI beneficiary is declining



Note: HI (Hospital Insurance). Hospital Insurance is also known as Medicare Part A.

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- As the baby-boom generation ages, enrollment in the Medicare program will surge. In 15 years, Medicare is projected to have over 80 million beneficiaries—up from 54 million beneficiaries today.
- While Medicare enrollment is rising, the number of workers per beneficiary is rapidly declining. Workers pay for Medicare spending through payroll taxes and income taxes. However, the number of workers per Medicare beneficiary declined from 4.6 during the early years of the program to 3.1 today and is projected by the Medicare trustees to fall to 2.3 by 2030.
- These demographics threaten the financial stability of the Medicare program.

Chart 1-14. Medicare HI and SMI benefits and cost sharing per FFS beneficiary

	Average benefit in 2013 (in dollars)	Average cost sharing in 2012* (in dollars)
HI	$5,069	$422
SMI	5,169	1,278

Note: HI (Hospital Insurance), SMI (Supplementary Medical Insurance), FFS (fee-for-service). Dollar amounts are nominal for FFS Medicare only and do not include Part D. "Average benefit" represents amounts paid for covered services per FFS beneficiary and excludes administrative expenses. "Average cost sharing" represents the sum of deductibles, coinsurance, and balance billing paid for covered services per FFS beneficiary.
*Data for average cost sharing in 2013 is not yet available from CMS.

Source: CMS Office of the Actuary, 2014 annual report of the Boards of Trustees of the Medicare trust funds; Medicare and Medicaid Statistical Supplement 2013, CMS Office of Information Services.

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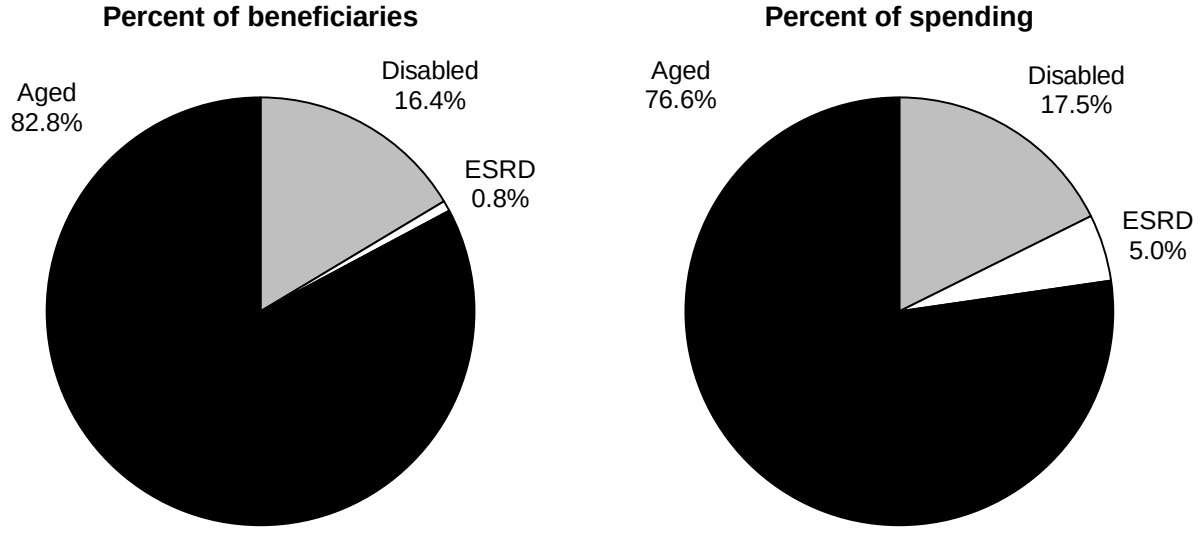
- In calendar year 2013, the Medicare program made $5,069 in HI (Part A) benefit payments and $5,169 in Supplementary Medical Insurance (SMI) (Part B) benefit payments on average per beneficiary.
- Beneficiaries owed an average of $422 in cost sharing for HI, $1,278 in cost sharing for SMI, and a total of $1,550 (not shown in chart) in cost sharing for both in calendar year 2012 (the latest year for which such data are available).
- To cover some of those cost-sharing requirements, about 90 percent of beneficiaries have coverage that supplements or replaces the Medicare benefit package, such as Medicare Advantage, Medicaid, supplemental coverage through former employers, and medigap coverage.

SECTION 2

Medicare beneficiary demographics

Chart 2-1. Aged beneficiaries account for the greatest share of the Medicare population and program spending, 2011

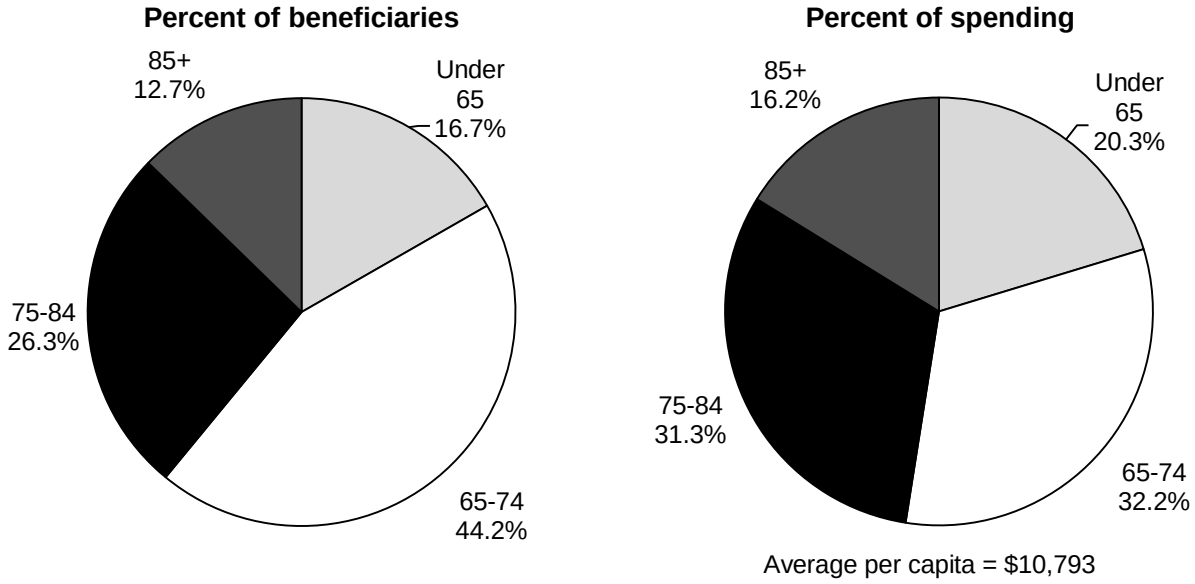


Note: ESRD (end-stage renal disease). The "aged" category refers to beneficiaries ages 65 or older without ESRD. The "disabled" category refers to beneficiaries under age 65 without ESRD. The "ESRD" category refers to beneficiaries with ESRD, regardless of age. Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- In 2011, beneficiaries ages 65 or older without ESRD composed 82.8 percent of the beneficiary population and accounted for 76.6 percent of Medicare spending. Beneficiaries under 65 with a disability and beneficiaries with ESRD accounted for the remaining population and spending.
- In 2011, average Medicare spending per beneficiary was $10,793.
- A disproportionate share of Medicare expenditures is devoted to Medicare beneficiaries with ESRD. On average, these beneficiaries incur spending that is more than six times greater than spending for aged beneficiaries (65 years or older without ESRD) or for beneficiaries under age 65 with disability (non-ESRD). In 2011, $76,078 was spent per ESRD beneficiary versus $9,978 per aged beneficiary and $11,507 per beneficiary under age 65 enrolled because of disability.

Chart 2-2. Medicare enrollment and spending by age group, 2011

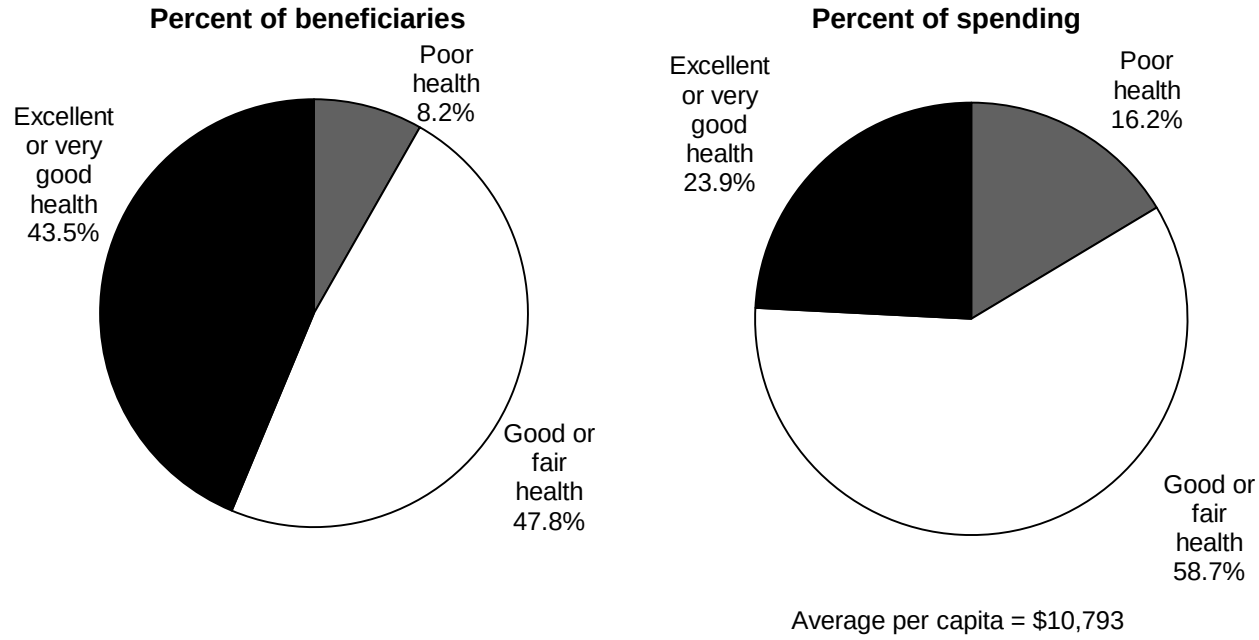


Note: Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- For the aged population (65 or older), per capita expenditures increase with age. In 2011, per capita expenditures were $7,859 for beneficiaries 65 to 74 years old, $12,805 for those 75 to 84 years old, and $13,788 for those 85 or older (data not shown).
- In 2011, per capita expenditures for Medicare beneficiaries under age 65 who were enrolled because of end-stage renal disease or disability were $12,630 (data not shown).

Chart 2-3. Beneficiaries who report being in poor health account for a disproportionate share of Medicare spending, 2011

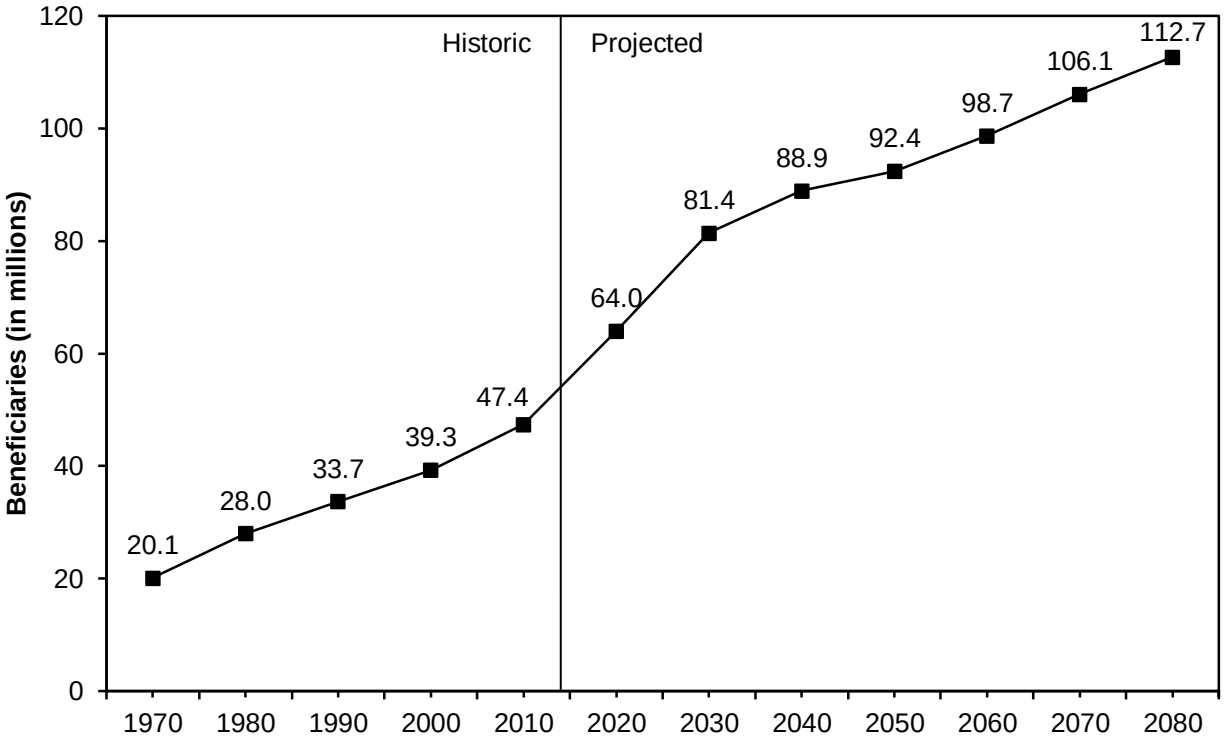


Note: Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- In 2011, most beneficiaries reported fair to excellent health. Fewer than 10 percent reported poor health.
- Medicare spending is strongly associated with self-reported health status. In 2011, per capita expenditures were $5,938 for those who reported excellent or very good health, $13,250 for those who reported good or fair health, and $21,440 for those who reported poor health (data not shown).

Chart 2-4. Enrollment in the Medicare program is projected to grow rapidly in the next 20 years



Note: Enrollment numbers are based on Part A enrollment only. Beneficiaries enrolled only in Part B are not included.

Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- The total number of people enrolled in the Medicare program will increase from about 50 million in 2012 to about 81 million in 2030.
- The rate of increase in Medicare enrollment will accelerate until 2030 as more members of the baby-boom generation become eligible, at which point it will continue to increase, but more slowly, after the entire baby-boom generation has become eligible.

Chart 2-5. Characteristics of the Medicare population, 2011

Characteristic	Percent of the Medicare population	Characteristic	Percent of the Medicare population
Total (48,420,576)	100%	**Living arrangement**	
		Institution	5%
Sex		Alone	28
Male	45	Spouse	48
Female	55	Other	19
Race/ethnicity		**Education**	
White, non-Hispanic	76	No high school diploma	22
African American, non-Hispanic	9	High school diploma only	28
		Some college or more	48
Hispanic	9		
Other	5	**Income status**	
		Below poverty	15
Age		100–125% of poverty	8
<65	16	125–200% of poverty	21
65–74	44	200–400% of poverty	28
75–84	26	Over 400% of poverty	26
85+	13		
		Supplemental insurance status	
Health status		Medicare only	16
Excellent or very good	43	Managed care	27
Good or fair	49	Employer-sponsored insurance	28
Poor	8	Medigap	14
		Medigap with employer-sponsored insurance	1
Residence			
Urban	77	Medicaid	14
Rural	23	Other	1

Note: "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside MSAs. In 2011, poverty was defined as income of $10,788 for people living alone and $13,609 for married couples. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category. Poverty thresholds are calculated by the U.S. Census Bureau (https://www.census.gov/hhes/www/poverty/data/threshld/). Some beneficiaries may have more than one type of supplemental insurance.

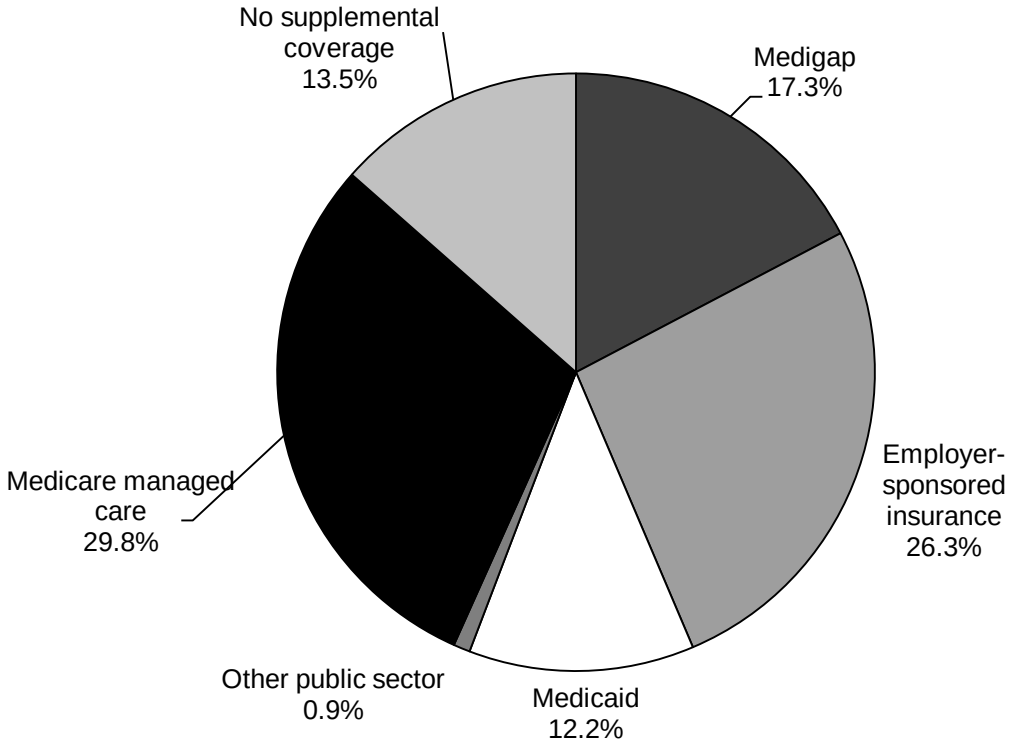
Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Most Medicare beneficiaries are female and White.
- Close to one-quarter of beneficiaries live in rural areas.
- Twenty-eight percent of the Medicare population lives alone.
- Close to one-quarter of beneficiaries have no high school diploma.
- Most Medicare beneficiaries have some source of supplemental insurance. Employer-sponsored plans are the most common source of supplemental coverage.

SECTION 3

Medicare beneficiary and other payer financial liability

Chart 3-1. Sources of supplemental coverage among noninstitutionalized Medicare beneficiaries, 2011



Note: Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2011. They could have had coverage in other categories during 2011. "Other public sector" includes federal and state programs not included in other categories. Analysis includes only beneficiaries not living in institutions such as nursing homes. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2011 or who had Medicare as a secondary payer.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Most beneficiaries living in the community (noninstitutionalized) have coverage that supplements or replaces the Medicare benefit package. In 2011, about 86 percent of beneficiaries had supplemental coverage or participated in Medicare managed care.
- About 44 percent of beneficiaries had private sector supplemental coverage such as medigap (about 17 percent) or employer-sponsored retiree coverage (about 26 percent).
- About 13 percent of beneficiaries had public sector supplemental coverage, primarily Medicaid.
- About 30 percent of beneficiaries participated in Medicare managed care. This care includes Medicare Advantage, health care prepayment, and cost plans. These types of arrangements generally replace Medicare's fee-for-service coverage and often add to it.
- The numbers in this chart differ from those in Chart 2-5, Chart 4-1, and Chart 4-4 because of differences in the populations represented by the charts. This chart excludes beneficiaries in long-term care institutions, Chart 2-5 and Chart 4-4 include all Medicare beneficiaries, and Chart 4-1 excludes beneficiaries in Medicare Advantage.

Chart 3-2. Sources of supplemental coverage among noninstitutionalized Medicare beneficiaries, by beneficiaries' characteristics, 2011

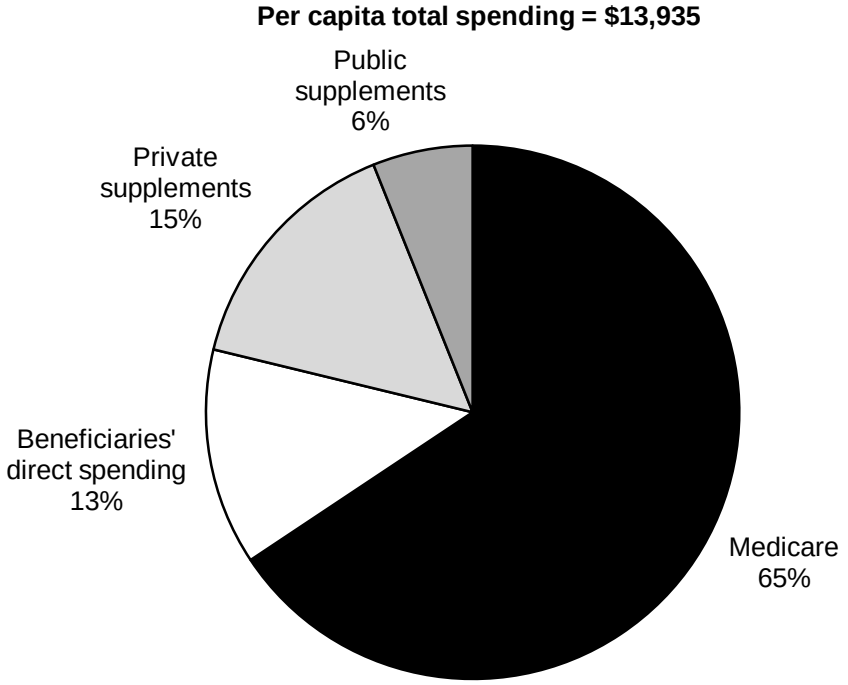
	Number of beneficiaries (thousands)	Employer-sponsored insurance	Medigap insurance	Medicaid	Medicare managed care	Other public sector	Medicare only
All beneficiaries	**42,697**	**26%**	**17%**	**12%**	**30%**	**1%**	**14%**
Age							
<65	6,983	11	3	32	24	1	29
65–69	10,119	26	17	6	32	1	18
70–74	8,129	30	19	6	34	1	10
75–79	6,826	30	20	7	33	1	10
80–84	5,253	33	23	6	28	1	10
85+	5,087	31	25	7	27	1	10
Income category							
<$10,000	5,481	5	9	48	24	1	12
$10,000–$19,999	11,880	14	15	14	33	2	22
$20,000–$29,999	8,689	27	19	1	36	1	16
$30,000–$39,999	5,034	34	21	0	31	0	14
$40,000–$59,999	5,375	41	20	0	28	0	11
$60,000–$79,999	2,620	50	19	0	23	0	6
≥$80,000	3,616	49	23	0	20	0	8
Eligibility status							
Aged	35,492	29	20	6	31	1	12
Disabled	6,818	10	3	32	24	1	29
ESRD	346	16	13	26	22	2	21
Residence							
Urban	32,546	27	15	9	34	1	14
Rural	10,151	25	25	14	16	1	20
Sex							
Male	18,984	28	16	9	29	1	17
Female	23,713	25	18	12	30	1	13
Health status							
Excellent/very good	19,021	31	20	5	30	1	13
Good/fair	20,287	24	16	13	31	1	15
Poor	3,206	14	9	27	22	2	26

Note: ESRD (end-stage renal disease). Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2011. They could have had coverage in other categories during 2011. Medicare managed care includes Medicare Advantage, cost, and health care prepayment plans. "Other public sector" includes federal and state programs not included in other categories. Married people have joint income reported on the data file. We divided their income by 1.26 to create an equal measure with unmarried people. "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside MSAs. Analysis includes beneficiaries living in the community. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2011 or who had Medicare as a secondary payer. The number of beneficiaries differs among boldface categories because we excluded beneficiaries with missing values. Numbers in rows may not sum to 100 due to rounding.

Source: MedPAC analysis of 2011 Medicare Current Beneficiary Survey, Cost and Use file.

- Beneficiaries most likely to have employer-sponsored supplemental coverage are those who are older than 64, have income over $20,000, are eligible because of age, and report better than poor health.
- Medigap is most common among those who are ages 65 or older, have income over $20,000, are eligible because of age or ESRD, are rural dwelling, and report better than poor health.
- Medicaid coverage is most common among those who are under age 65, have income below $20,000, are eligible because of disability or ESRD, are rural dwelling, female, and report poor health.
- Lack of supplemental coverage (Medicare coverage only) is most common among beneficiaries who are under age 65, have income of $10,000 to $20,000, are eligible because of disability or ESRD, are rural dwelling, are male, and report poor health.

Chart 3-3. Total spending on health care services for noninstitutionalized FFS Medicare beneficiaries, by source of payment, 2011



Note: FFS (fee-for-service). "Private supplements" includes employer-sponsored plans and individually purchased coverage. "Public supplements" includes Medicaid, Department of Veterans Affairs, and other public coverage. "Direct spending" is on Medicare cost sharing and noncovered services but not supplemental premiums. Analysis includes only FFS beneficiaries not living in institutions such as nursing homes.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

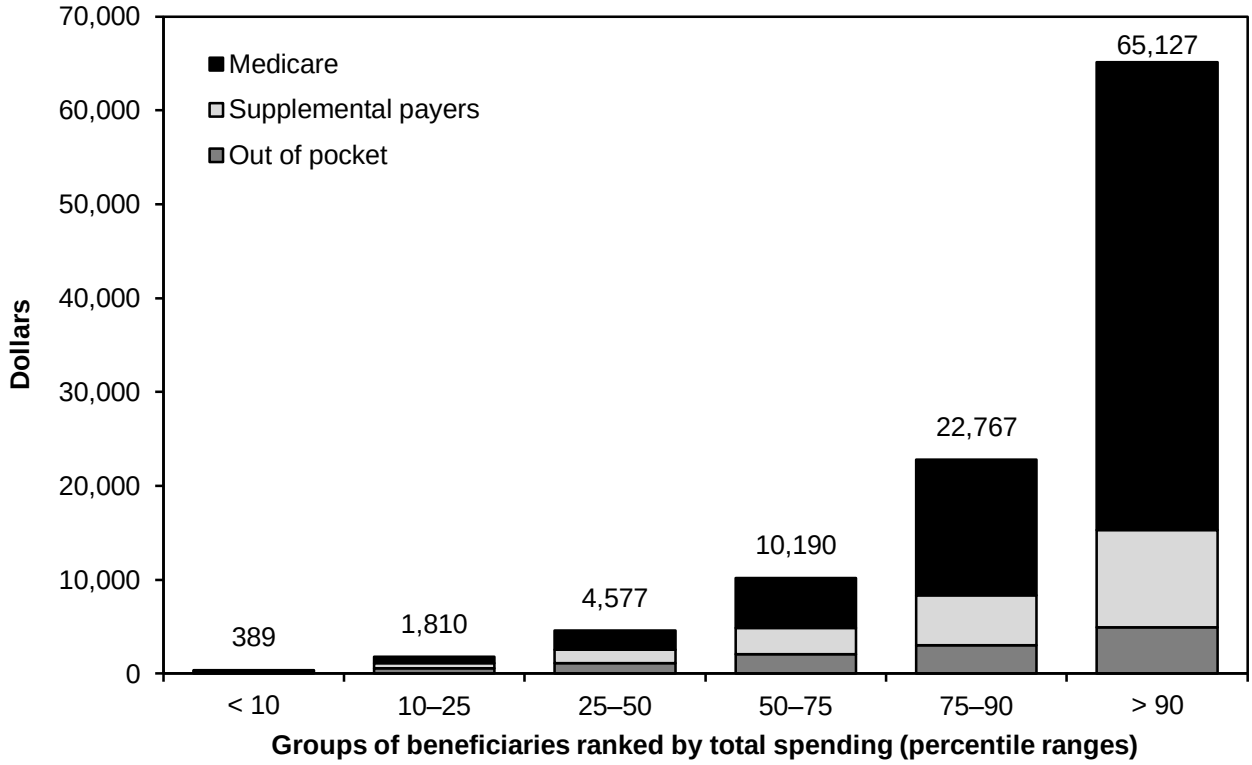
- Among FFS beneficiaries living in the community, the total cost of health care services (defined as beneficiaries' direct spending as well as expenditures by Medicare, other public sector sources, and all private sector sources on all health care goods and services) averaged about $13,900 in 2011. Medicare was the largest source of payment: It paid 65 percent of the health care costs for FFS beneficiaries living in the community, an average of $9,107 per beneficiary. The level of Medicare spending in this chart differs from the level in Chart 2-1 because this chart excludes beneficiaries in Medicare Advantage and those living in institutions, while Chart 2-1 represents all Medicare beneficiaries.

- Private sources of supplemental coverage—primarily employer-sponsored retiree coverage and medigap—paid 15 percent of beneficiaries' costs, an average of $2,141 per beneficiary.

- Beneficiaries paid 13 percent of their health care costs out of pocket, an average of $1,840 per beneficiary.

- Public sources of supplemental coverage—primarily Medicaid—paid 6 percent of beneficiaries' health care costs, an average of $848 per beneficiary.

Chart 3-4. Per capita total spending on health care services among noninstitutionalized FFS beneficiaries, by source of payment, 2011



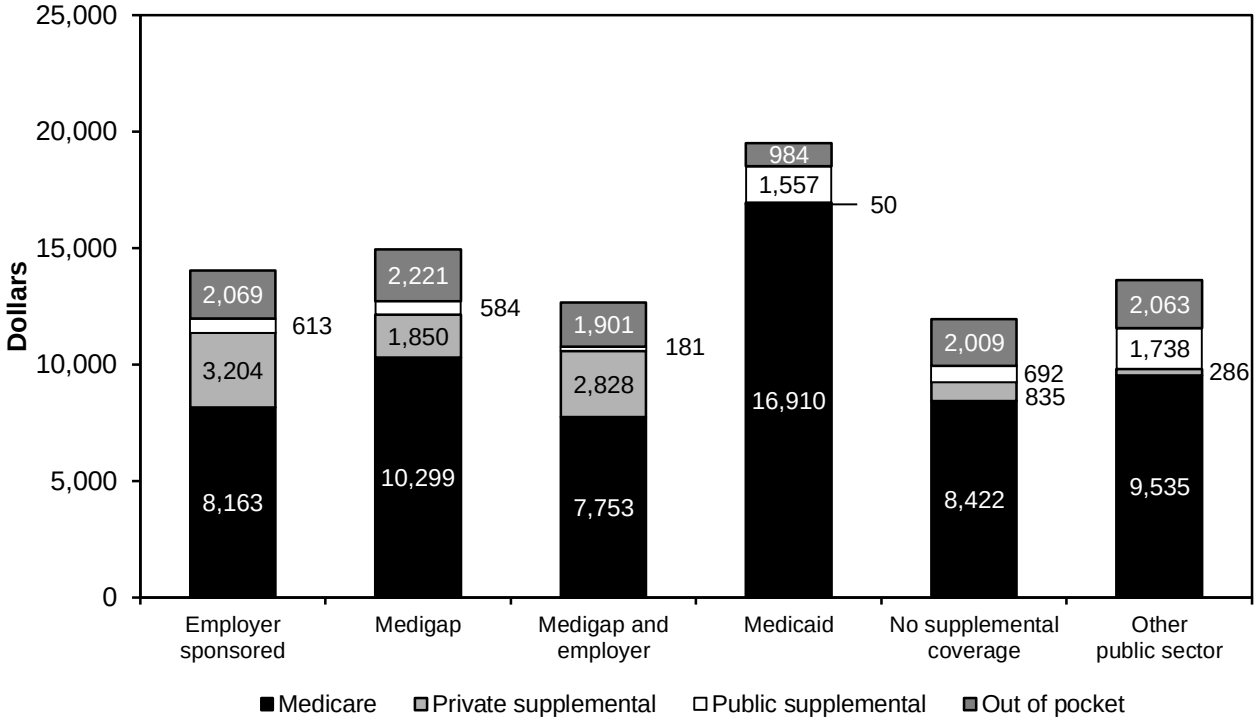
Note: FFS (fee-for-service). Analysis excludes those who are not in FFS Medicare and those living in institutions such as nursing homes. "Out-of-pocket" spending includes Medicare cost sharing and noncovered services.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Total spending on health care services varied dramatically among FFS beneficiaries living in the community in 2011. Per capita spending for the 10 percent of beneficiaries with the highest total spending averaged $65,127. Per capita spending for the 10 percent of beneficiaries with the lowest total spending averaged $389.

- Among FFS beneficiaries living in the community, Medicare paid a larger percentage as total spending increased, and beneficiaries' out-of-pocket spending was a smaller percentage as total spending increased. For example, Medicare paid 65 percent of total spending for all beneficiaries, but paid 77 percent of total spending for the 10 percent of beneficiaries with the highest total spending. Beneficiaries' out-of-pocket spending covered 13 percent of total spending for all beneficiaries, but only 8 percent of total spending for the 10 percent of beneficiaries with the highest total spending.

Chart 3-5. Variation in and composition of total spending among noninstitutionalized FFS beneficiaries, by type of supplemental coverage, 2011



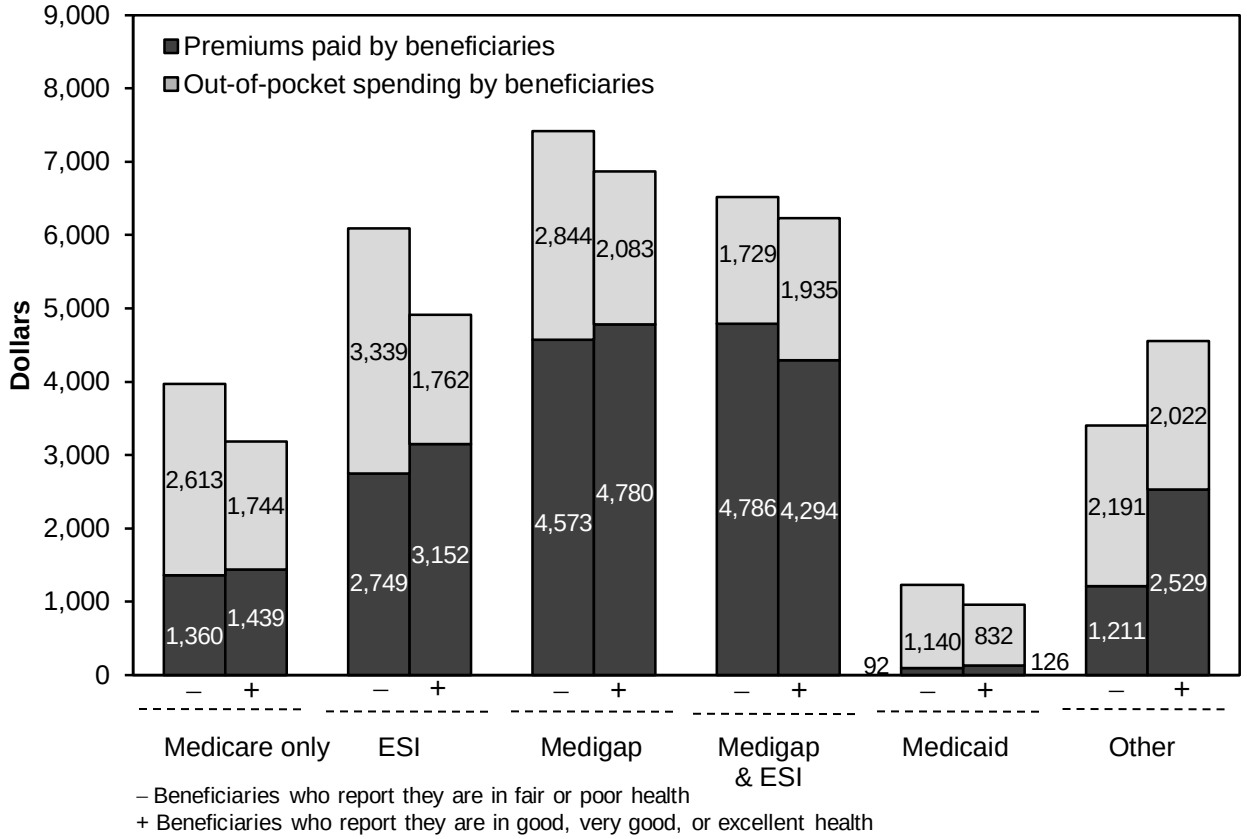
Note: FFS (fee-for-service). Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2011. They could have had coverage in other categories during 2011. "Other public sector" includes federal and state programs not included in the other categories. "Private supplemental" includes employer-sponsored plans and individually purchased coverage. "Public supplemental" includes Medicaid, Department of Veterans Affairs, and other public coverage. Analysis excludes beneficiaries who are not in FFS Medicare or live in institutions such as nursing homes. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2011 or had Medicare as a second payer. "Out-of-pocket" spending includes Medicare cost sharing and noncovered services, but not supplemental premiums.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- The level of total spending (defined as beneficiaries' out-of-pocket spending as well as expenditures by Medicare, other public sector sources, and all private sector sources on all health care goods and services) among FFS beneficiaries living in the community varied by the type of supplemental coverage they had. Total spending was lower for those beneficiaries with no supplemental coverage than for those beneficiaries who had supplemental coverage. Beneficiaries with Medicaid coverage had the highest level of total spending—63 percent higher than those with no supplemental coverage in 2011.

- Medicare was the largest source of payment for beneficiaries in each supplemental insurance category, but the second largest source of payment differed. Among those with employer-sponsored, medigap, or Medicaid supplemental coverage, combined public and private supplemental coverage was the second largest source of payment. Among those who were covered only by Medicare, beneficiaries' out-of-pocket spending was the second largest source of payment.

Chart 3-6. Out-of-pocket spending for premiums and health services per beneficiary, by insurance and health status, 2011



Note: ESI (employer-sponsored supplemental insurance). Out-of-pocket premium costs are much higher than in our June 2014 Data Book (especially for those who have medigap coverage) because the 2011 database includes Part C and Part D premiums in the out-of-pocket premium variable, whereas the 2010 database did not.

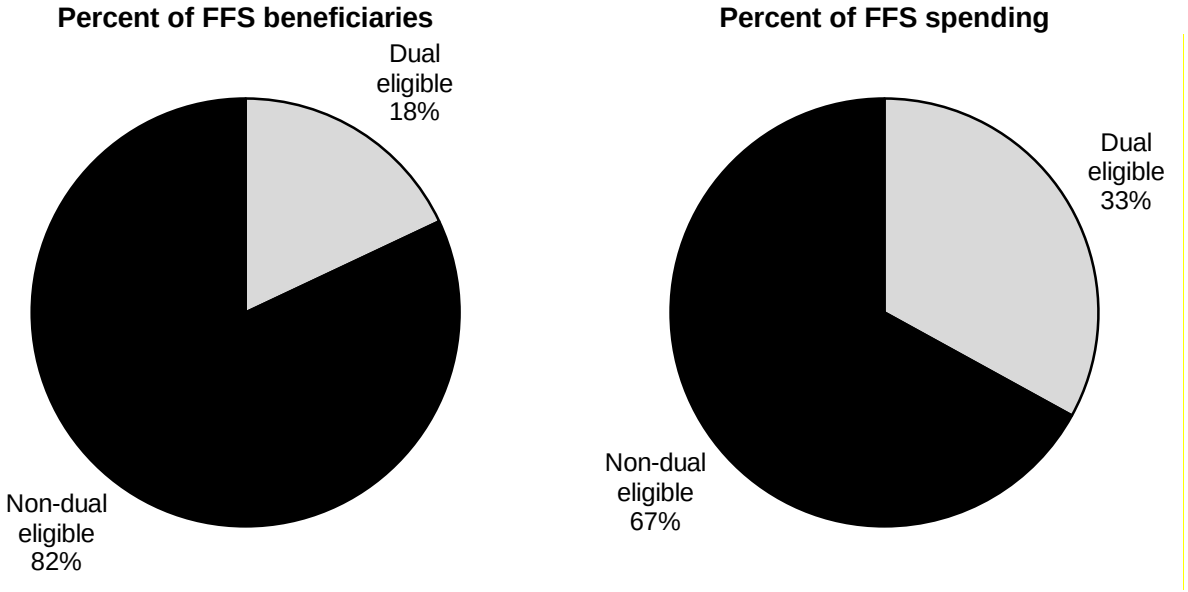
Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- This diagram illustrates out-of-pocket spending on services and premiums by beneficiaries' supplemental insurance and health status in 2011. For example, beneficiaries who had only traditional Medicare coverage ("Medicare only") and reported fair or poor health averaged $1,360 in out-of-pocket spending on premiums and $2,613 on services in 2011. Those who had Medicare-only coverage and reported good, very good, or excellent health averaged $1,439 in out-of-pocket spending on premiums and $1,744 on services.
- Insurance that supplements Medicare does not shield beneficiaries from all out-of-pocket costs. Beneficiaries who reported being in fair or poor health spent more out of pocket for health services than those reporting good, very good, or excellent health, regardless of the type of coverage they had to supplement Medicare, except for those who had both ESI and medigap coverage.
- Despite having supplemental coverage, beneficiaries who had ESI or medigap had out-of-pocket spending that was more than those who had only coverage under traditional Medicare ("Medicare only"). This result likely reflects the fact that beneficiaries who had ESI or medigap had higher incomes and were likely to have stronger preferences for health care.
- What beneficiaries actually pay out of pocket varies by type of supplemental coverage. For those with medigap, out-of-pocket spending generally reflects the premiums and costs of services not covered by Medicare. Beneficiaries with ESI usually pay less out of pocket for Medicare noncovered services than those with medigap but may pay more in Medicare deductibles and cost sharing.

SECTION 4

Dual-eligible beneficiaries

Chart 4-1. Dual-eligible beneficiaries account for a disproportionate share of Medicare spending, 2011

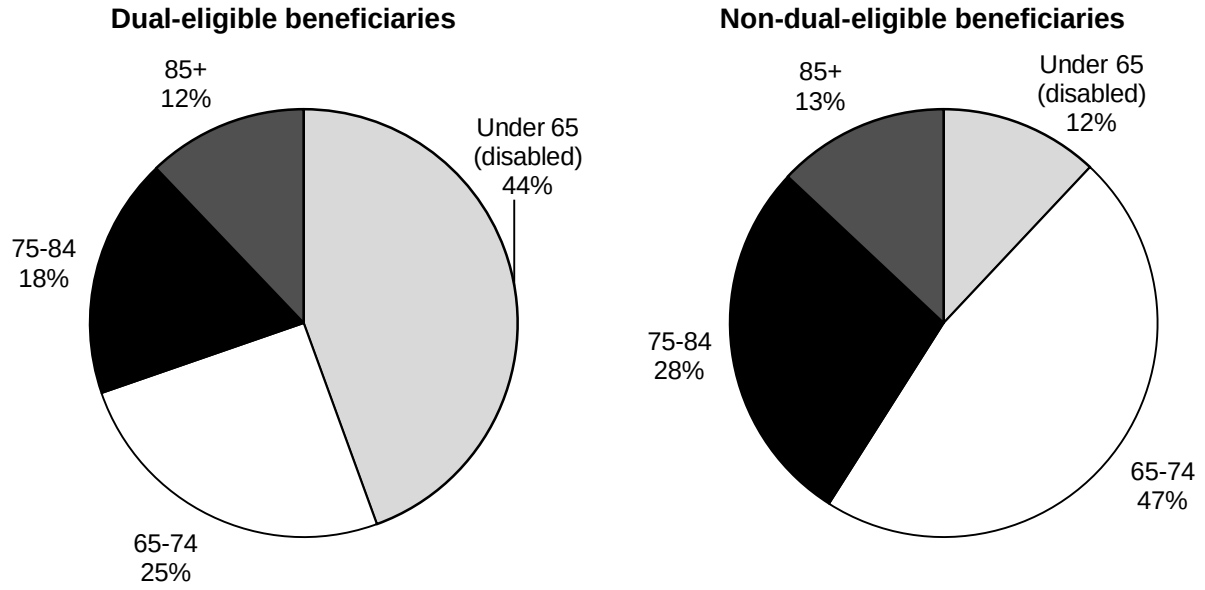


Note: FFS (fee for service). Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Dual-eligible beneficiaries are those who qualify for both Medicare and Medicaid. Medicaid is a joint federal and state program designed to help people with low incomes obtain needed health care.
- Dual-eligible beneficiaries account for a disproportionate share of Medicare FFS expenditures. As 18 percent of the Medicare FFS population, they represented 33 percent of aggregate Medicare FFS spending in 2011.
- On average, Medicare FFS per capita spending is more than twice as high for dual-eligible beneficiaries compared with non-dual-eligible beneficiaries: In 2011, $19,113 was spent per dual-eligible beneficiary, and $8,685 was spent per non-dual-eligible beneficiary.
- In 2011, average total spending—which includes Medicare, Medicaid, supplemental insurance, and out-of-pocket spending across all payers—for dual-eligible beneficiaries was about $30,500 per beneficiary, about twice the amount for other Medicare beneficiaries.

Chart 4-2. Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to be under age 65 and disabled, 2011

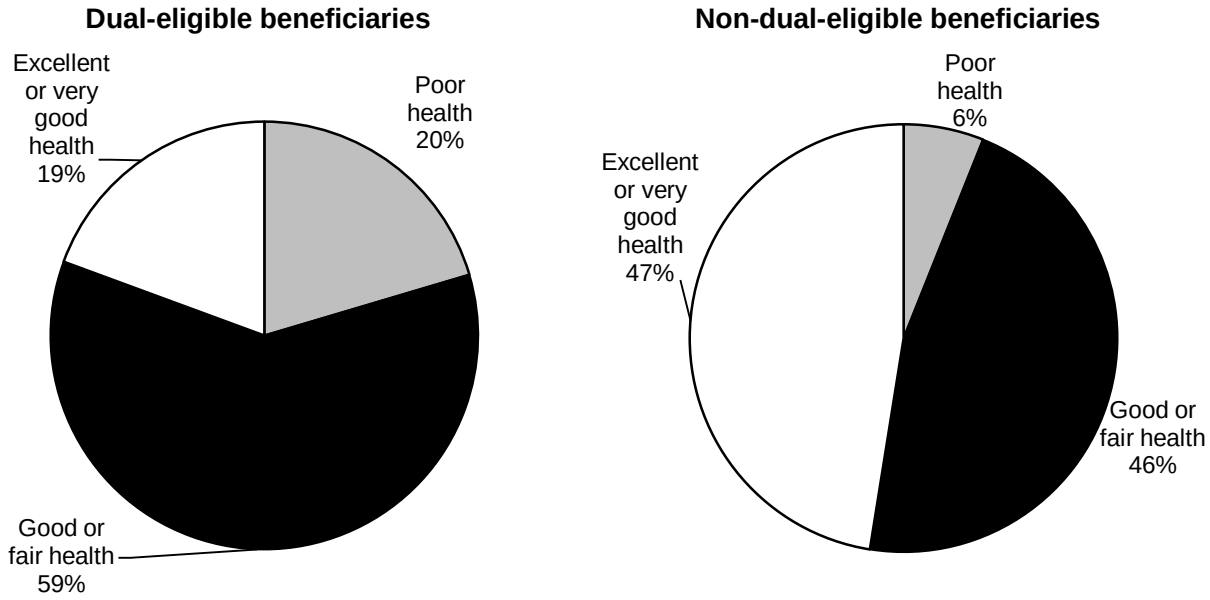


Note: Beneficiaries who are under age 65 qualify for Medicare because they are disabled. Once disabled beneficiaries reach age 65, they are counted as aged beneficiaries. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Disability is a pathway for individuals to become eligible for both Medicare and Medicaid benefits.
- Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to be under age 65 and disabled. In 2011, 44 percent of dual-eligible beneficiaries were under age 65 and disabled compared with 12 percent of the non-dual-eligible population.

Chart 4-3. Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to report poorer health status, 2011



Note: Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding or nonresponse to survey question.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to report poorer health status. In 2011, 20 percent of dual-eligible beneficiaries reported being in poor health compared with 6 percent of non-dual-eligible beneficiaries.

- Almost half of non-dual-eligible beneficiaries (47 percent) reported being in excellent or very good health in 2011. In comparison, less than one-fifth (19 percent) of dual-eligible beneficiaries reported being in excellent or very good health.

Chart 4-4. Demographic differences between dual-eligible beneficiaries and non-dual-eligible beneficiaries, 2011

Characteristic	Percent of dual-eligible beneficiaries	Percent of non-dual-eligible beneficiaries
Sex		
Male	39%	46%
Female	61	54
Race/ethnicity		
White, non-Hispanic	58	79
African American, non-Hispanic	18	8
Hispanic	14	8
Other	10	4
Limitations in ADLs		
No ADLs	43	69
1–2 ADLs	27	21
3–6 ADLs	31	10
Residence		
Urban	70	78
Rural	30	22
Living arrangement		
Institution	18	2
Alone	30	28
Spouse	14	54
Children, nonrelatives, others	37	16
Education		
No high school diploma	48	18
High school diploma only	26	29
Some college or more	23	52
Income status		
Below poverty	61	9
100–125% of poverty	18	7
125–200% of poverty	17	21
200–400% of poverty	4	33
Over 400% of poverty	1	30
Supplemental insurance status		
Medicare or Medicare/Medicaid only	93	18
Medicare managed care	3	31
Employer-sponsored insurance	1	32
Medigap	1	17
Medigap/employer	0	1
Other*	4	1

Note: ADL (activity of daily living). Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in other supplemental insurance. "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside MSAs. In 2011, poverty was defined as income of $10,788 for people living alone and $13,609 for married couples. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category. Poverty thresholds are calculated by the U.S. Census Bureau (https://www.census.gov/hhes/www/poverty/data/threshld/).
*Includes public programs such as the Department of Veterans Affairs and state-sponsored drug plans.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Dual-eligible beneficiaries qualify for Medicaid due in part to low incomes. In 2011, 61 percent lived below the federal poverty level, and 95 percent lived below 200 percent of the poverty level. Compared with non-dual-eligible beneficiaries, dual-eligible beneficiaries are more likely to be female, be African American or Hispanic, lack a high school diploma, have greater limitations in activities of daily living, reside in a rural area, and live in an institution. They are less likely to have sources of supplemental coverage other than Medicaid.

Chart 4-5. Differences in Medicare spending and service use between dual-eligible beneficiaries and non-dual-eligible beneficiaries, 2011

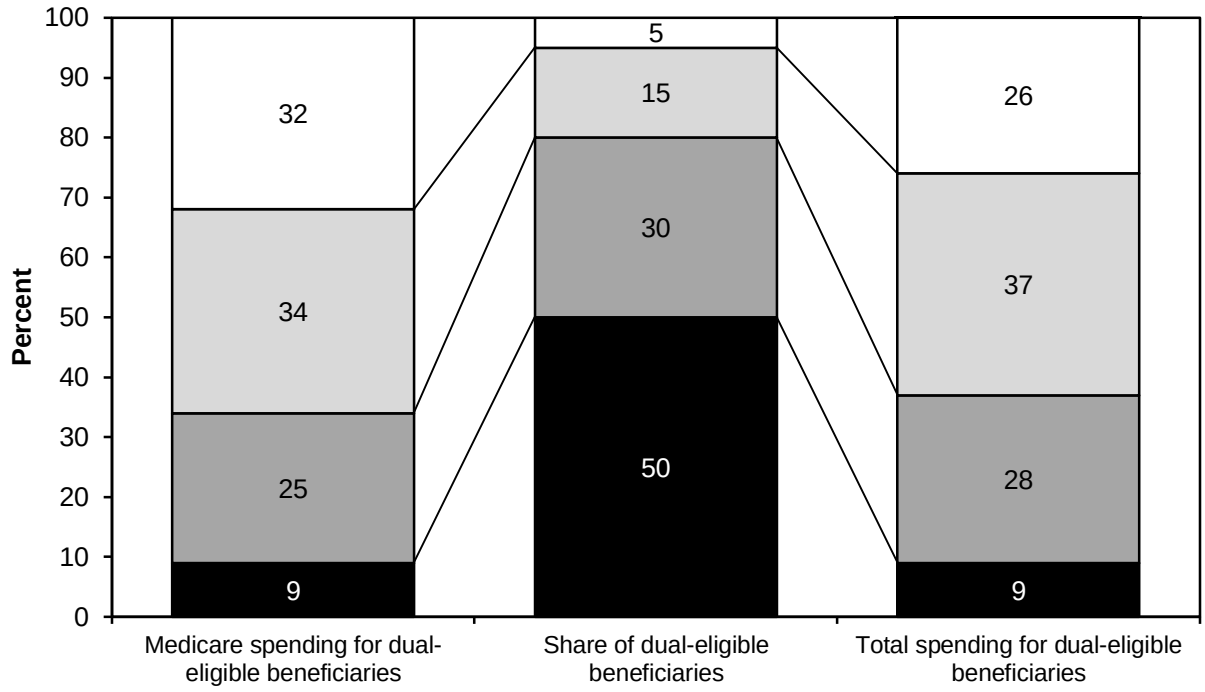
Service	Dual-eligible beneficiaries	Non-dual-eligible beneficiaries
Average FFS Medicare payment for all beneficiaries		
Total Medicare FFS payments	$19,113	$8,685
Inpatient hospital	5,488	2,772
Physician[a]	3,308	2,416
Outpatient hospital	2,040	1,168
Home health	854	416
Skilled nursing facility[b]	1,489	561
Hospice	511	229
Prescribed medication[c]	5,396	1,117
Percent of FFS beneficiaries using service		
Percent using any type of service	97.5%	86.3%
Inpatient hospital	23.6	16.2
Physician[a]	92.6	82.1
Outpatient hospital	79.0	61.0
Home health	13.1	8.2
Skilled nursing facility[b]	7.8	4.1
Hospice	3.6	2.0
Prescribed medication[c]	78.0	44.4

Note: FFS (fee-for-service). Data in this analysis are restricted to beneficiaries in FFS. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Spending totals derived from the Medicare Current Beneficiary Survey (MCBS) do not necessarily match official estimates from CMS Office of the Actuary. Total payments may not equal the sum of line items due to omitted "other" category.
[a] Includes a variety of medical services, equipment, and supplies.
[b] Individual short-term facility (usually skilled nursing facility) stays for the MCBS population.
[c] Data from Medicare Advantage–Prescription Drug plans and stand-alone prescription drug plans.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2011.

- Average per capita Medicare FFS spending for dual-eligible beneficiaries was more than twice that for non-dual-eligible beneficiaries—$19,113 compared with $8,685.
- For each type of service, average Medicare FFS per capita spending is higher for dual-eligible beneficiaries than for non-dual-eligible beneficiaries.
- Higher average per capita FFS spending for dual-eligible beneficiaries is a function of a higher use of these services by dual-eligible beneficiaries compared with their non-dual-eligible counterparts. Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to use each type of Medicare-covered service.

Chart 4-6. Both Medicare and total spending are concentrated among dual-eligible beneficiaries, 2011



Note: "Total spending" includes Medicare, Medicaid, supplemental insurance, and out-of-pocket spending. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use files 2011.

- Annual Medicare FFS spending on dual-eligible beneficiaries is concentrated among a small number. The costliest 20 percent of dual-eligible beneficiaries accounted for 66 percent of Medicare spending and 63 percent of total spending on dual-eligible beneficiaries in 2011. In contrast, the least costly 50 percent of dual-eligible beneficiaries accounted for only 9 percent of Medicare spending and 9 percent of total spending on dual-eligible beneficiaries.

- On average, total spending (including Medicaid, medigap, etc.) for dual-eligible beneficiaries in 2011 was about twice that for non-dual-eligible beneficiaries—about $30,500 compared with about $15,178.

SECTION 5

Quality of care in the Medicare program

Chart 5-1. In-hospital and 30-day postdischarge mortality rates improved from 2010 to 2013

Condition or procedure	Risk-adjusted rate per 100 eligible discharges, 2010	Risk-adjusted rate per 100 eligible discharges, 2013	Directional change in rate, 2010–2013
In-hospital mortality			
Acute myocardial infarction	7.33	5.73	Better
Congestive heart failure	3.54	2.89	Better
Stroke	10.00	8.06	Better
Hip fracture	3.09	2.50	Better
Pneumonia	3.73	2.91	Better
30-day postdischarge mortality			
Acute myocardial infarction	11.38	11.54	No difference
Congestive heart failure	9.56	9.48	No difference
Stroke	23.08	21.77	Better
Hip fracture	8.24	8.18	No difference
Pneumonia	9.10	8.31	Better

Note: Rates are calculated based on the discharges eligible to be counted in each measure. Rates do not include deaths in non–inpatient prospective payment system hospitals or Medicare Advantage plans. "Better" indicates that the risk-adjusted rate decreased by a statistically significant amount from 2010 to 2013 using a $p \leq 0.01$ criterion. "No difference" indicates that the change in the rate was not statistically significant from 2010 to 2013 using a $p \leq 0.01$ criterion.

Source: MedPAC analysis of CMS Medicare Provider Analysis and Review data using Agency for Healthcare Research and Quality (AHRQ) Inpatient Quality Indicators version 4.1b (with modifications for 30-day mortality rate calculations).

- Our most recent analysis of mortality rates of Medicare beneficiaries treated for the five medical conditions listed in this chart shows generally positive trends. We used five of the Inpatient Quality Indicators developed by AHRQ to measure risk-adjusted mortality rates during a hospital stay for treatment of the referenced medical condition (the in-hospital rate) as well as mortality in the 30-day period following Medicare patients' discharges from the hospital. The rates are calculated using software developed by AHRQ applied to Medicare inpatient hospital discharge data. We examine the magnitude and direction of changes in the rates over time to assess whether inpatient care quality for Medicare beneficiaries is improving, worsening, or not changing.

- Risk-adjusted rates of in-hospital mortality for all five conditions improved (i.e., the rates declined) by a statistically significant amount from 2010 to 2013.

- Over the same period (2010 to 2013), risk-adjusted rates of mortality within 30 days after discharge also improved (declined) for hospital stays related to treatment of stroke and pneumonia and remained unchanged (showed no statistically significant improvement or decline) for patients treated for acute myocardial infarction, congestive heart failure, and hip fracture.

Chart 5-2. Most hospital inpatient patient safety indicators were stable from 2010 to 2013

Patient safety indicator	Risk-adjusted rate per 100 eligible discharges, 2010	Risk-adjusted rate per 100 eligible discharges, 2013	Directional change in rate, 2010–2013
Death among surgical inpatients with treatable serious complications	11.45	11.72	No difference
Iatrogenic pneumothorax	0.02	0.03	No difference
Postoperative respiratory failure	0.88	0.83	No difference
Postoperative PE or DVT	0.41	0.35	Better
Postoperative wound dehiscence	0.22	0.17	No difference
Accidental puncture or laceration	0.14	0.13	Better

Note: PE (pulmonary embolism), DVT (deep vein thrombosis). "Better" indicates that the risk-adjusted rate decreased by a statistically significant amount from 2010 to 2013 using a $p \leq 0.01$ criterion.

Source: MedPAC analysis of CMS Medicare Provider Analysis and Review data using Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators, version 4.1b.

- We analyzed six Patient Safety Indicators (PSIs) developed by AHRQ to measure the frequency of potentially preventable adverse events that can occur during an inpatient stay. Examples of PSIs include the development immediately after surgery of a blood clot that can suddenly obstruct an artery or vein, or a patient's death after suffering serious but treatable complications following surgery. The rates are calculated using AHRQ software and Medicare inpatient hospital discharge data.

- From 2010 to 2013, rates improved by a statistically significant amount for two of the six PSIs we analyzed: development of postoperative pulmonary embolism or deep-vein thrombosis, and accidental puncture or laceration during a procedure. The other four PSIs did not change (did not improve or worsen) from 2010 to 2013. The rate changes are tested for statistical significance using a stringent criterion ($p \leq 0.01$) to minimize the probability that the observed change in the rates is because of random variation.

- Care should be taken in interpreting all of the reported PSI rates. These measures assess rates of very rare events, which makes it difficult to detect statistically significant changes, even when the measurement sample includes all inpatient prospective payment system hospitals. Further, the statistical reliability of some, if not all, PSIs can be affected by variations over time in hospital diagnostic coding practices. The Commission monitors these PSIs as high-level indicators, but not definitive evidence, of trends in the rates of these types of serious treatment-related harm to patients that can be avoided with adherence to known clinical safety practices.

Chart 5-3. SNFs improved on risk-adjusted rates of community discharge and potentially avoidable rehospitalizations, but there was no change in patient functional status

Measure	2011	2012	2013
Discharged to the community	33.2%	35.6%	37.5%
Potentially avoidable rehospitalizations during SNF stay	12.4	11.5	11.1
Potentially avoidable rehospitalizations during 30 days after discharge from SNF	5.8	5.6	5.5
Combined rate of rehospitalization during SNF stay or within 30 days after discharge from SNF	16.5	15.5	15.1
Rate of improvement in one or more mobility ADLs	43.6	43.6	43.7
Rate of no decline in mobility	87.2	87.2	87.2

Note: SNF (skilled nursing facility), ADL (activity of daily living). High rates of discharge to the community indicate better quality. High rehospitalization rates indicate worse quality. The rate of improvement in mobility ADLs is the average of the rates of improvement in bed mobility, transfer, and ambulation, weighted by the number of stays included in each measure. Stays with improvement in one, two, or three mobility ADLS are counted in the improvement measures. The rate of no decline in mobility is the share of stays with no decline in any of the three ADLs. Rates are the average of facility rates and calculated for all facilities with 25 or more stays, except the rate of potentially avoidable rehospitalization during the 30 days after discharge, which is reported for all facilities with 20 or more stays. Measures exclude hospital-based swing-bed units.

Source: Kramer, A., M. Lin, R. Fish, et al. 2015. *Refinement of community discharge, potentially avoidable readmission, and functional outcome SNF quality measures.* Report prepared by staff from Providigm LLC for the Medicare Payment Advisory Commission. Washington, DC: MedPAC.

- Rates of risk-adjusted community discharge and potentially avoidable rehospitalization among SNF patients improved between 2012 and 2013. A higher percentage of beneficiaries were discharged home, and a lower percentage was readmitted to an acute care hospital for 1 of 13 potentially avoidable conditions. The rates vary slightly from rates reported last year because of minor changes in the methodologies.

- The rehospitalization rates count only stays readmitted to a hospital with the principal diagnosis of a potentially avoidable condition. The 13 potentially avoidable conditions include congestive heart failure, electrolyte imbalance/dehydration, respiratory infection, sepsis, urinary tract or kidney infection, hypoglycemia or diabetic complications, anticoagulant complications, fractures and musculoskeletal injuries, acute delirium, adverse drug reactions, cellulitis/wound infections, pressure ulcers, and abnormal blood pressure.

- The two risk-adjusted measures of change in functional status were essentially unchanged between 2012 and 2013. The mobility measures are composites of the patients' abilities regarding bed mobility, transfer, and ambulation, and they consider the likelihood that a patient will change, given her functional ability at admission. A facility admitting patients with worse prognoses will have a lower expected rate of achieving these outcomes, and this difference will be reflected in the risk-adjusted rates. The rate of improvement in mobility shows the share of stays with improvement in one, two, or three ADLs: bed mobility, transfer, and ambulation. The rate of no decline in mobility is the share of stays with no decline in any of the three ADLs. The rates differ from those reported last year because of changes in the methodologies.

Chart 5-4. Risk-adjusted home health quality measures held steady or improved slightly from 2008 to 2013

Functional measure	2008	2011	2012	2013
Improvements in:				
Transferring	51%	51%	52%	52%
Bathing	62	62	63	63
Walking	N/A	53	55	57
Medication management	N/A	43	45	46
Pain management	N/A	65	65	65

Note: N/A (not applicable). The measures for walking, medication management, and pain management changed in 2011, and therefore the 2008 results shown are not comparable with data from later years.

Source: MedPAC analysis of Outcome and Assessment Information Set, home health standard analytic file, and CMS Home Health Compare data.

- Medicare publishes risk-adjusted home health quality measures that track changes in the functional abilities for patients who receive home health care. These measures do not include home health episodes that end with a hospitalization.
- Since 2008, the rates of functional improvement have generally held steady or have slightly improved each year.

Chart 5-5. Dialysis quality of care: Some measures show progress, others need improvement, 2008–2012

Outcome measure	2008	2010	2012
Percent of in-center hemodialysis patients:			
Receiving adequate dialysis	N/A	96%	97%
Anemia measures			
Mean hemoglobin 10 to < 12 g/dL	51%	60	71
Mean hemoglobin ≥ 12 g/dL*	41	30	7
Mean hemoglobin < 10 g/dL	8	10	22
Dialyzed with an AV fistula*	50	56	60
Percent of peritoneal dialysis patients:			
Receiving adequate dialysis	N/A	88	90
Anemia measures			
Mean hemoglobin 10 to < 12 g/dL	52	60	64
Mean hemoglobin ≥ 12 g/dL*	36	27	7
Mean hemoglobin < 10 g/dL	12	14	29
Percent of all dialysis patients wait-listed for a kidney	17	17	17
Renal transplant rate per 100 dialysis-patient years	4.4	4.1	3.7
Annual mortality rate per 100 patient years*	19.7	18.5	17.1
Total admissions per patient year*	1.9	1.9	1.7
Hospital days per patient year	12.9	12.1	11.0

Note: g/dL (grams per deciliter [of blood]), AV (arteriovenous), N/A (not available). The rate per patient year is calculated by dividing the total number of events by the fraction of the year that patients were followed. Data on dialysis adequacy, use of fistulas, and anemia management represent the share of patients meeting CMS's clinical performance measures. The United States Renal Data System adjusts data by age, gender, race, and primary diagnosis of end-stage renal disease. Because of CMS's claims reporting requirements, 2010 dialysis adequacy reflects data from July 1, 2010, to December 31, 2010.
*Lower values suggest higher quality.

Source: Compiled by MedPAC from Fistula First, the United States Renal Data System, and 2010 and 2012 institutional outpatient files from CMS.

- Quality of dialysis care is mixed. Performance has improved on some measures, but performance on others remains unchanged.

- All hemodialysis patients require vascular access—the site on the patient's body where blood is removed and returned during dialysis. Between 2008 and 2012, use of arteriovenous fistulas, considered the best type of vascular access, increased from 50 percent to 60 percent of hemodialysis patients. Between 2008 and 2012, overall adjusted mortality rates decreased but remained high among dialysis patients.

- Between 2010 and 2012, the proportion of hemodialysis patients receiving adequate dialysis remained high. Between 2008 and 2012, overall rates of hospitalization declined.

- Other measures suggest that improvements in dialysis quality are still needed. We looked at access to kidney transplantation because it is widely believed to be the best treatment option for individuals with end-stage renal disease. Between 2008 and 2012, the proportion of dialysis patients accepted on the kidney transplant waiting list remains low, and the renal transplant rate per 100 dialysis patient years declined.

Chart 5-6. Medicare Advantage quality measures generally show improvement between 2012 and 2014

Measures	HMO averages (cost plans included) 2012	2013	2014	Local PPO averages 2012	2013	2014
HEDIS® administrative measures						
Osteoporosis management	22.5	24.8	29.2[a]	19.3	19.4	22.7[ab]
Rheumatoid arthritis management	72.6	75.4[a]	76.1	77.7	79.3	80.6[b]
HEDIS® hybrid measures						
BMI documented	68.1	81.7[a]	90.1[ab]	63.2	77.1[a]	86.5[ab]
Colorectal cancer screening	60.0	63.1[a]	65.1[ab]	55.5	59.1[a]	61.8[ab]
Cholesterol screening for patients with heart disease	88.9	89.5	89.8[b]	88.4	87.7	88.0[b]
Controlling blood pressure	64.0	63.9	65.8[a]	61.3	60.0	63.9[a]
Cholesterol screening for patients with diabetes	88.3	88.7	89.6[a]	86.7	86.7	88.0[a]
Eye exam to check for damage from diabetes	66.0	67.6	68.8	64.3	65.5	67.3
Kidney function testing for members with diabetes	89.8	90.5[a]	91.4[ab]	88.1	88.5	89.6[ab]
Diabetics not controlling blood sugar (lower rate better)	26.5	25.4	24.3[b]	28.4	28.6	25.1[ab]
Measures from HOS[c]						
Advising physical activity	48.6	50.0[a]	50.3[b]	47.7	49.1[a]	48.4[b]
Improving bladder control	34.9	34.6	34.3[b]	35.8	35.9	36.3[b]
Reducing the risk of falling	60.5	61.8[a]	60.8[b]	54.3	56.6[a]	56.5[b]
Other measures based on HOS						
Improving or maintaining physical health	65.5	66.5[a]	68.8[a]	65.6	67.1[a]	68.3[a]
Improving or maintaining mental health	76.5	77.5[a]	79.1[ab]	77.8	78.0	80.3[ab]
Measures from CAHPS®						
Annual flu vaccine	68.0	70.7[a]	72.3[a]	68.8	72.0[a]	73.8
Ease of getting needed care and seeing specialists	84.4	84.9	83.6[ab]	85.9	86.1	85.3[ab]
Getting appointments and care quickly	75.5	75.7	76.0[b]	76.5	76.2	77.2[ab]
Overall rating of health care quality	85.8	85.9	86.0	86.5	86.3	86.4
Overall rating of plan	86.2	86.2	85.8	85.1	85.0	85.1
Care coordination	N/R	84.8	85.1	N/R	85.8	85.8

Note: HMO (health maintenance organization), PPO (preferred provider organization), HEDIS® (Healthcare Effectiveness Data and Information Set, a registered trademark of the National Committee for Quality Assurance), BMI (body mass index), HOS (Health Outcomes Survey), CAHPS® (Consumer Assessment of Healthcare Providers and Systems, a registered trademark of the Agency for Healthcare Research and Quality), N/R (not reported). Data exclude regional PPOs, private fee-for-service plans, and employer-directed plans. Cost-reimbursed HMO plans are included. HEDIS administrative measures are calculated using administrative data; hybrid measures can involve sampling medical records to determine a rate. Averages are for all reporting plans in each year; results may therefore differ from those shown in other MedPAC reporting of scores for plans that report measures for both years of a two-year time period.

[a] Statistically significant difference in performance from previous year ($p < 0.05$).

[b] Statistically significant difference in performance in 2014 between HMO and PPO results ($p < 0.05$).

[c] Results shown for HEDIS measures taken from HOS (the three measures listed) include scores for plans not reporting other HEDIS data. Results may therefore differ from those shown in other MedPAC reporting of these scores.

Source: MedPAC analysis of CMS HEDIS public use files for HEDIS measures and star ratings data for measures based on HOS and for CAHPS measures.

(Chart continued on next page)

Chart 5-6. Medicare Advantage quality measures generally show improvement between 2012 and 2014 (continued)

- The chart displays the simple averages across all plans in each category (HMOs and local PPOs) for each year.
- The measures listed are included in the measures that CMS uses to develop plan star ratings, which are the basis of quality bonus payments for plans (see Chart 9-12). For star rating purposes, measures have different weights. Process measures, such as each of the HEDIS administrative measures in the table, have a weight of 1.0. Patient experience measures, including the last four items in the table, have a weight of 1.5. Outcome measures have a weight of 3. The table includes two HEDIS outcome measures used in the star ratings: controlling blood pressure (for all patients with hypertension) and poor control of blood glucose among diabetics. In the last year, the former measure showed statistically significant improvement for both HMO and PPO enrollees, and the latter measure showed statistically significant improvement among PPO enrollees. The HOS-based outcome measures, which track changes over a two-year period in plan enrollees' self-reported mental and physical health, improved from 2013 to 2014 for both HMOs and PPOs.
- Among HMOs, 10 of the 21 measures shown in the chart had statistically significant improvement between 2013 and 2014. In addition to the HEDIS- and HOS-based outcome measures, HMOs improved on four screening or testing measures, on influenza vaccination rates, and on osteoporosis management for women with a fracture. HMOs showed a decline in the CAHPS measure of ease of getting needed care and seeing specialists, as was true of PPOs. Among local PPOs, 11 measures showed statistically significant improvement between 2013 and 2014, including the same 4 screening or testing measures with HMO improvement. The HEDIS- and HOS-based outcome measures also showed improvement.
- In 2014, HMOs performed better than local PPOs on eight measures shown in the chart. For five of the eight HEDIS hybrid measures—which are measures that can involve documentation from a review of a sample of medical records—HMOs continue to perform better than local PPOs, though PPOs showed statistically significant improvement on six of the hybrid measures between 2013 and 2014. HMOs also performed better than local PPOs in osteoporosis management in women who have had a fracture; advising enrollees to engage in physical activity; reducing the risk of falling among members with a problem falling, walking, or maintaining balance; and the CAHPS measure of the overall rating of the plan.
- In 2014, local PPOs performed better than HMOs on eight measures, including a measure of rheumatoid arthritis management and a measure of improving bladder control. In patient experience measures, PPOs performed better than HMOs in members' perception of their ease of getting needed care, but HMO plans had higher overall plan ratings.
- HEDIS includes a measure of hospital readmissions that is an element of the CMS star system (readmission within 30 days of a hospital admission, for any cause). For this measure (with a weight of 3 in the star rating system), HMOs and local PPOs had readmission rates below expected rates, and results improved between 2013 and 2014 for both types of plans (not shown in chart).

Chart 5-7. Use and spending for selected services detected by measures of low-value care in fee-for-service Medicare, 2012

Measure	Broader version of measures			Narrower version of measures		
	Count per 100 beneficiaries	Share of beneficiaries affected	Spending (millions)	Count per 100 beneficiaries	Share of beneficiaries affected	Spending (millions)
Imaging for nonspecific low back pain	12.0	8.9%	$224	3.6	3.3%	$67
PSA screening at age ≥ 75 years	9.6	6.6	82	5.5	4.5	47
Colon cancer screening for older adults	8.7	8.2	435	0.4	0.4	4
Carotid artery disease screening in asymptomatic patients	5.5	5.0	286	4.5	4.2	236
Preoperative chest radiography	5.1	4.6	74	1.3	1.2	19
Stress testing for stable coronary disease	4.8	4.6	1,334	0.5	0.5	152
PTH testing in early CKD	4.2	2.4	77	3.7	2.1	67
Head imaging for headache	3.8	3.4	248	2.6	2.4	167
Cervical cancer screening at age > 65 years	2.9	2.9	59	2.6	2.6	52
Homocysteine testing in cardiovascular disease	1.5	1.2	12	0.5	0.4	4
Head imaging for syncope	1.3	1.2	82	0.8	0.8	55
Preoperative echocardiography	0.8	0.8	61	0.3	0.2	20
Carotid artery disease screening for syncope	0.7	0.7	38	0.5	0.5	26
Preoperative stress testing	0.7	0.7	186	0.2	0.2	66
CT for rhinosinusitis	0.6	0.5	39	0.3	0.3	18
BMD testing at frequent intervals	0.5	0.5	10	0.3	0.3	7
Cancer screening for patients with CKD on dialysis	0.4	0.3	7	0.1	0.1	1
PCI/stenting for stable coronary disease	0.3	0.3	1,258	0.1	0.1	204
Arthroscopic surgery for knee osteoarthritis	0.3	0.3	222	0.1	0.1	116
Vertebroplasty	0.2	0.2	361	0.2	0.2	352
Renal artery stenting	0.2	0.2	445	0.0	0.0	85
IVC filter placement	0.2	0.2	40	0.2	0.2	40
Hypercoagulability testing after DVT	0.1	0.1	4	0.0	0.0	1
Preoperative PFT	0.1	0.1	1	0.1	0.1	1
Carotid endarterectomy for asymptomatic patients	0.1	0.1	176	0.0	0.0	75
EEG for headache	0.1	0.1	4	0.0	0.0	2
Total	**64.5**	**36.9**	**5,765**	**28.4**	**20.8**	**1,884**

Note: PSA (prostate-specific antigen), PTH (parathyroid hormone), CKD (chronic kidney disease), CT (computed tomography), BMD (bone mineral density), PCI (percutaneous coronary intervention), IVC (inferior vena cava), DVT (deep vein thrombosis), PFT (pulmonary function test), EEG (electroencephalography). "Count" refers to the number of unique services. Numbers may not sum to totals due to rounding. The total for share of beneficiaries affected does not equal the column sum because some beneficiaries received multiple low-value services.

Source: MedPAC analysis of 100 percent Medicare claims using measures developed by Schwartz et al. (2014).

(Chart continued on next page)

Chart 5-7. Use and spending for selected services detected by measures of low-value care in fee-for-service Medicare, 2012 (continued)

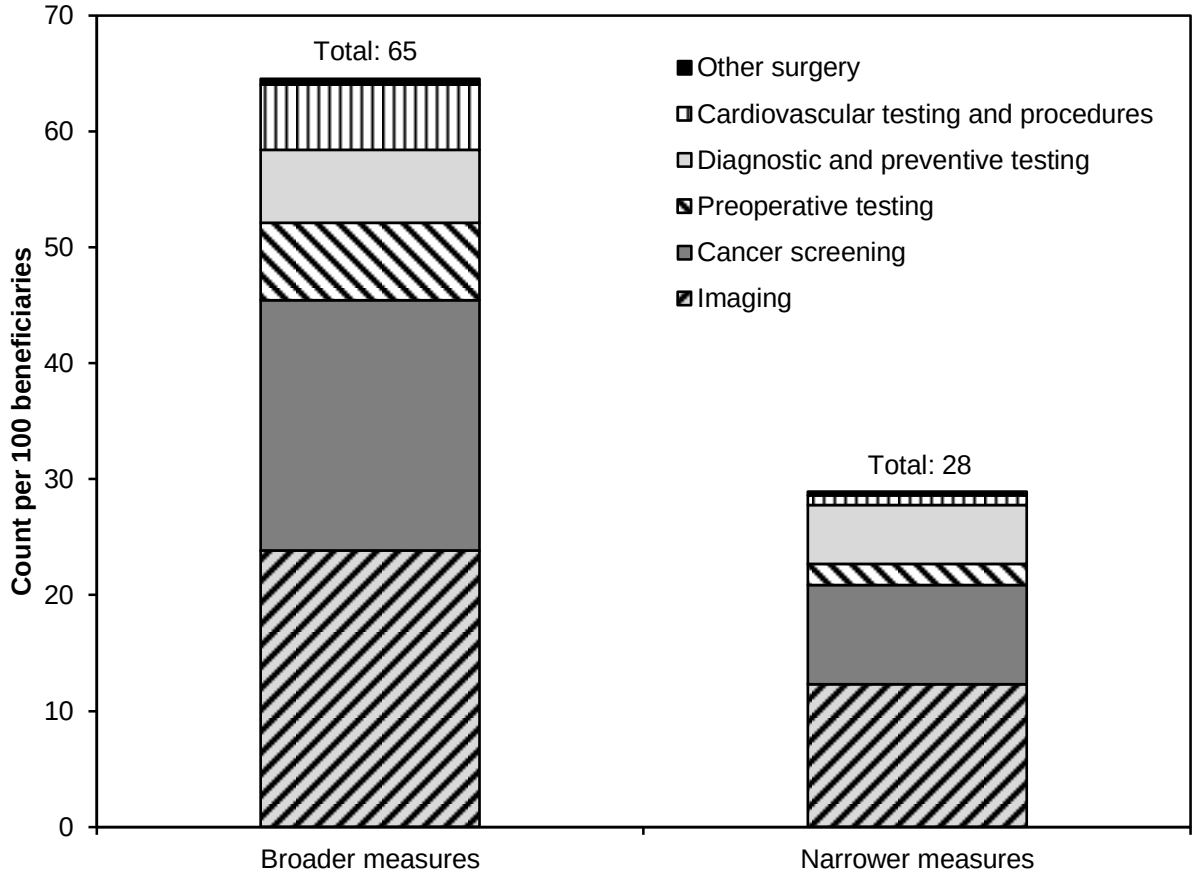
- Low-value care is the provision of a service that has little or no clinical benefit, or a service for which the risk of harm outweighs its potential benefit.

- The measures of low-value care in this chart were developed by a team of researchers that included two physicians (Schwartz, A. L., B. E. Landon, A. G. Elshaug, M. E. Chernew, and J. M. McWilliams. 2014. Measuring low-value care in Medicare. *JAMA Internal Medicine* 174: 1067–1076). The measures are drawn from evidence-based lists—such as Choosing Wisely—and the medical literature. We applied these measures to 100 percent Medicare claims data from 2012.

- The researchers developed two versions of each measure: a broader one with higher sensitivity (and lower specificity) and a narrower one with higher specificity (and lower sensitivity). Increasing the sensitivity of a measure captures more potentially inappropriate use, but also is more likely to misclassify some appropriate use as inappropriate. Increasing a measure's specificity leads to less misclassification of appropriate use as inappropriate at the expense of potentially missing some inappropriate use.

- Based on the broader versions of each measure, there were about 65 instances of low-value care per 100 beneficiaries across all the measures, and about 37 percent of beneficiaries received at least one low-value service. Based on the narrower versions of each measure, there were about 28 instances of low-value care per 100 beneficiaries, and about 21 percent of beneficiaries received at least one low-value service.

Chart 5-8. Use of services detected by selected measures of low-value care, by category, 2012

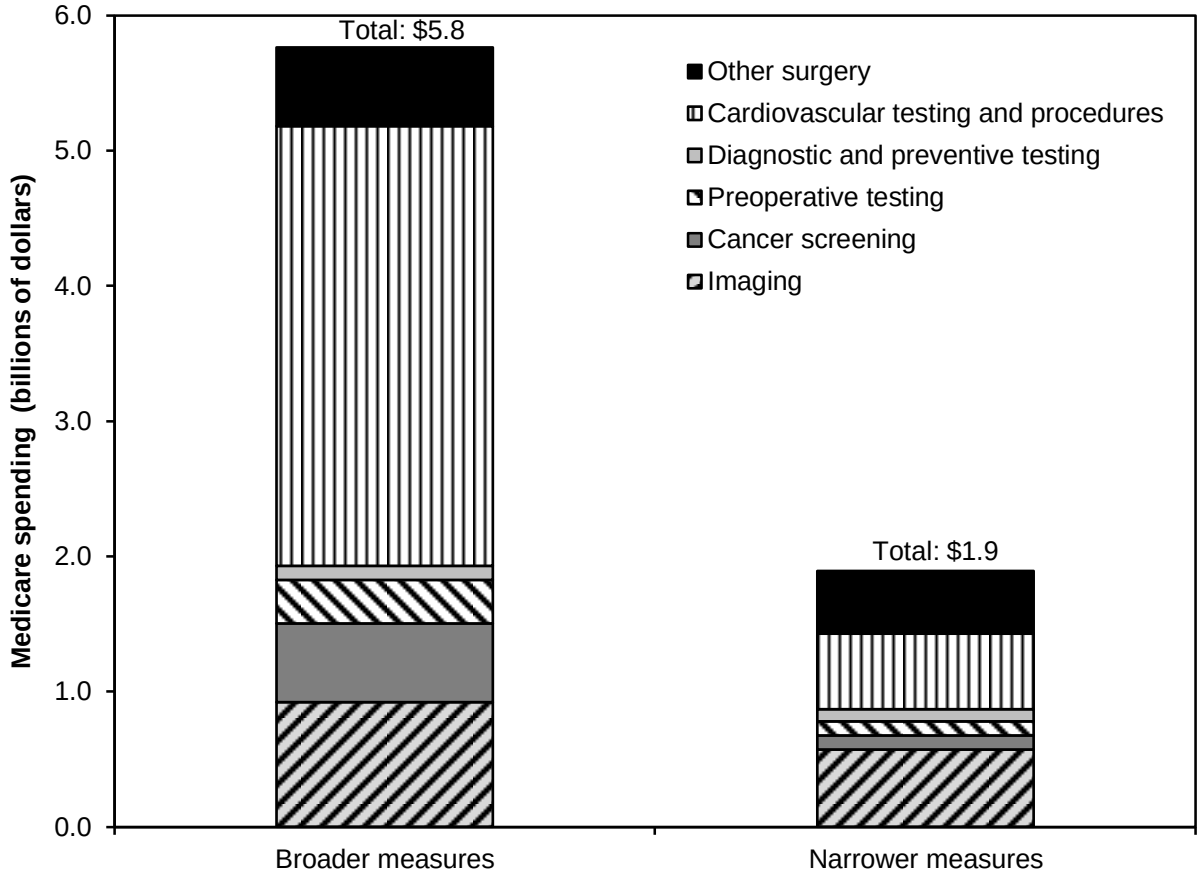


Note: "Count" refers to the number of unique services provided to fee-for-service Medicare beneficiaries.

Source: MedPAC analysis of 100 percent Medicare claims using measures developed by Schwartz et al. (2014).

- Following the methodology described in Schwartz et al. (2014), we assigned each of the 26 measures of low-value care in Chart 5-7 to 1 of 6 clinical categories.
- Imaging and cancer screening measures accounted for most of the volume of low-value care in 2012: about 70 percent of the instances of low-value care per 100 beneficiaries in both the broader and narrower versions of the measures. The imaging category includes back imaging for patients with nonspecific low back pain and screening for carotid artery disease in asymptomatic patients. The cancer screening category includes prostate-specific antigen testing for men age 75 or older and colorectal cancer screening for older patients.
- Because we used claims data to measure low-value care, our analysis likely represents a conservative estimate of the amount of low-value care in Medicare.

Chart 5-9. Spending on services detected by selected measures of low-value care, by category, 2012



Note: Spending includes Medicare Part A and Part B program spending and beneficiary cost sharing for services detected by measures of low-value care. To estimate spending, we used standardized prices to adjust for regional differences in payment rates. The standardized price is the median payment per service in 2009. This method was developed by Schwartz et al. (2014).

Source: MedPAC analysis of 100 percent Medicare claims using measures developed by Schwartz et al. (2014).

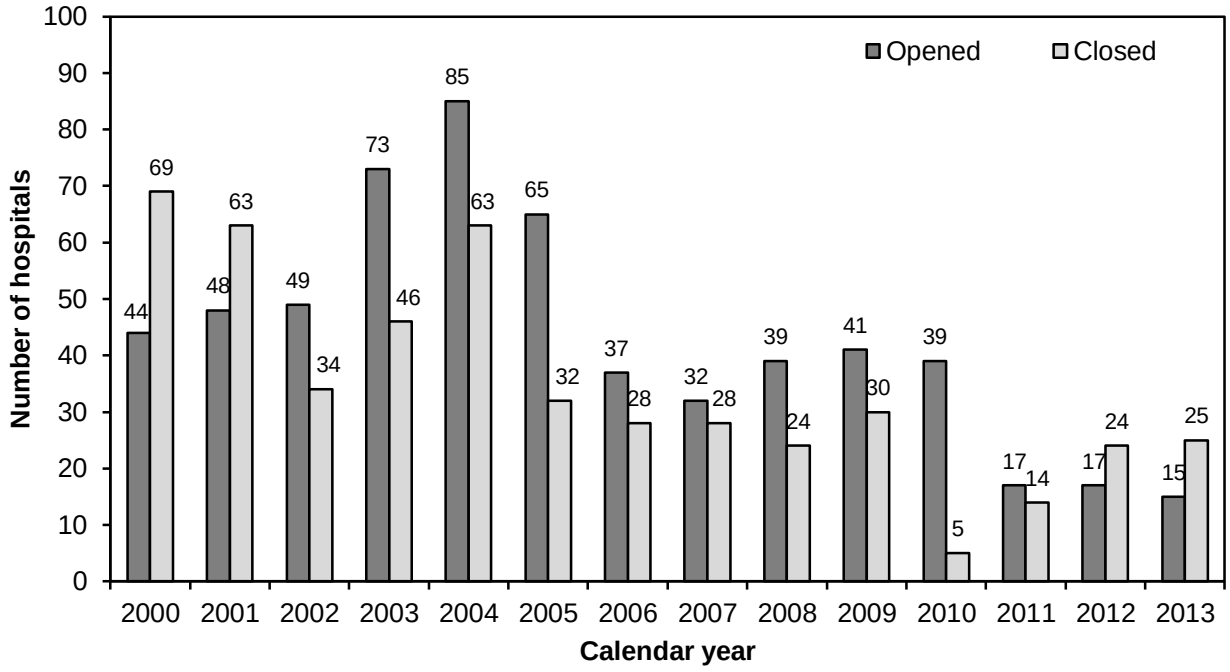
- Cardiovascular testing and procedures and imaging accounted for most of the spending on low-value care, comprising 60 percent of total spending on low-value care using the narrower measures and 72 percent of total spending using the broader measures.
- The cardiovascular testing and procedures category includes stress testing for stable coronary disease and percutaneous coronary intervention with balloon angioplasty or stent placement for stable coronary disease. The imaging category includes screening for carotid artery disease in asymptomatic patients and head imaging for uncomplicated headache.
- The spending estimates probably understate actual spending on low-value care because they do not include downstream services (e.g., follow-up tests and procedures) that may result from the initial low-value service.

SECTION 6

Acute inpatient services

Short-term hospitals
Inpatient psychiatric facilities

Chart 6-1. Annual changes in number of acute care hospitals participating in the Medicare program, 2000–2013



Note: "Hospitals" in this chart refers specifically to general short-term acute care hospitals. The Commission's reported number of open and closed hospitals can change from year to year based on hospitals that enter Medicare as an acute care facility and later convert to a more specialized type of facility such as a long-term care hospital or critical access hospital.

Source: MedPAC analysis of CMS's Provider of Service file, inpatient prospective payment system final rule impact file, and hospital cost reports.

- The number of hospital closures exceeded the number of openings in 2013, with 25 acute care hospitals closing and 15 hospitals starting participation in the Medicare program.
- In 2013, over 4,600 acute care hospitals (including critical access hospitals) participated in the Medicare program.

Chart 6-2. Percent change in hospital employment, by occupation, 2008–2013

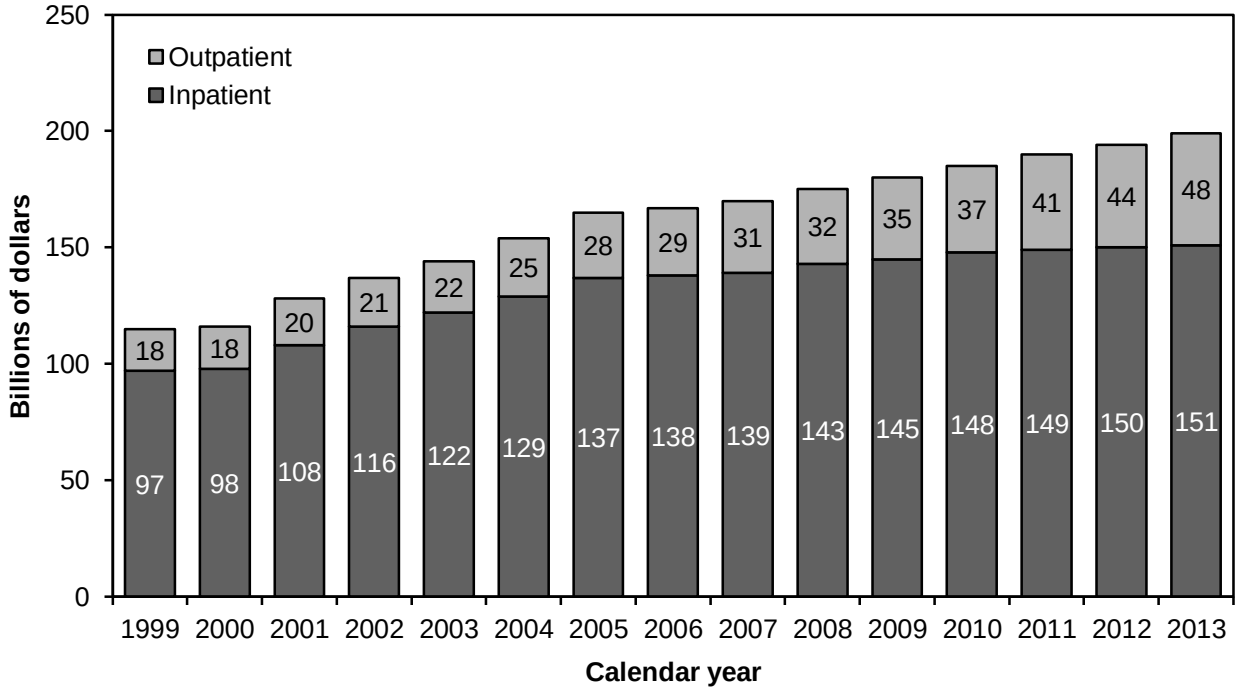
	Total hospital employment (May 2008)	Total hospital employment (May 2013)	Percent change in total hospital employment (2008–2013)
All hospital occupations	5,096,190	5,271,310	3.4%
Internists (direct employment)	8,100	11,900	46.9
Life, physical, and social science	25,550	32,460	27.1
Computer and math science	52,180	65,970	26.4
Surgeons (direct employment)	5,730	7,110	24.1
Diagnostic sonographers	28,930	34,580	19.5
Physician assistants	16,820	19,380	15.2
Pharmacists	55,530	63,870	15.0
Business and finance	92,160	105,990	15.0
Management	175,390	195,120	11.2
Registered nurses	1,458,520	1,553,080	6.5
Radiation technologists	125,640	133,710	6.4
HC clinicians and technical	2,712,350	2,878,800	6.1
Community and social services	103,380	100,110	–3.2
LPNs/LVNs	163,360	112,480	–31.1

Note: HC (health care), LPN (licensed practical nurse), LVN (licensed vocational nurse). "HC clinicians and technical occupations" represents an overall sum of occupations such as physicians, nurses, pharmacists, and imaging technicians.

Source: MedPAC analysis of Bureau of Labor Statistics, Occupational Employment Statistics data set as of September 2013.

- From May 2008 to May 2013, hospital employment increased 3.4 percent. By the end of this period, the hospital sector employed over 5.2 million individuals.
- Six occupations with notable growth in the hospital sector from 2008 to 2013 include internists employed directly by hospitals (46.9 percent); life, physical, and social science positions (27.1 percent); computer and math science positions (26.4 percent); surgeons employed directly by hospitals (24.1 percent); diagnostic sonographers (19.5 percent); and physician assistants (15.2 percent). Growth in the two physician groups suggests that hospitals have been more active in recent years in hiring physicians directly. Growth in computer and math science positions, in particular, may reflect hospitals' efforts to implement electronic health record systems.
- LPNs and LVNs, as well as community and social service positions (social workers), were among the few occupations to experience a decline in the number of individuals employed by hospitals from 2008 to 2013, declining by 31.1 percent and 3.2 percent, respectively. During the same period, the number of registered nurses employed by hospitals increased 6.5 percent (94,560 registered nurses), suggesting a continued shift toward employing nurses with a higher level of training.
- In 2013, hospital employment accounted for approximately 3.5 percent of the all U.S. nonfarm employment.

Chart 6-3. Growth in Medicare's FFS payments for hospital inpatient and outpatient services, 1999–2013



Note: FFS (fee-for-service). Analysis includes inpatient services covered by the acute inpatient prospective payment system (PPS); psychiatric, rehabilitation, long-term care, cancer, and children's hospitals and units; outpatient services covered by the outpatient PPS; and other outpatient services. Payments include program outlays and beneficiary cost sharing, including hospital cost sharing for beneficiaries eligible for Medicare because of end-stage kidney disease. The growth in spending was slowed in 2006 by increases in the number of Medicare Advantage enrollees, who are not included in these aggregate totals.

Source: CMS, Office of the Actuary.

- Aggregate Medicare FFS inpatient spending was $151 billion and outpatient spending was $48 billion in 2013. From 2012 to 2013, inpatient spending decreased about 1 percent, while outpatient spending increased about 8 percent.

- A freeze in inpatient payment rates in the Balanced Budget Act of 1997 reduced growth in inpatient spending from 1999 to 2000. Spending increased substantially between 2001 and 2005 but remained relatively unchanged from 2005 to 2007. Payment growth began to increase in 2008 for inpatient and, particularly, outpatient services.

- Outpatient spending has increased as a share of total Medicare hospital-based spending in the past 15 years. In 1999, outpatient spending accounted for almost 16 percent of all hospital spending; in 2013, outpatient spending grew to approximately 24 percent of total Medicare hospital spending.

- Outpatient spending per FFS beneficiary was about $1,440 in 2013, up from approximately $590 in 1999, an increase of 144 percent.

Chart 6-4. Share of Medicare acute care hospital inpatient discharges by hospital group, 2013

Hospital group	Hospitals		Medicare discharges	
	Number	Share of total	Number (thousands)	Share of total
All PPS and CAHs	4,662	100.0%	9,906	100.0%
CAHs	1,329	28.5	347	3.5
PPS hospitals	3,333	71.5	9,560	96.5
Urban (PPS only)	2,473	53.0	8,488	88.8
Large urban	1,350	29.0	4,667	48.8
Other urban	1,123	24.1	3,821	40.0
Rural (PPS only)	860	18.4	1,072	11.2
Rural referral	112	2.4	286	3.0
Sole community	371	8.0	492	5.1
Other rural < 50 beds	200	4.3	94	1.0
Other rural ≥ 50 beds	177	3.8	200	2.1
Tax status (PPS only)				
Voluntary	1,908	57.2	6,753	70.6
Proprietary	872	26.2	1,685	17.6
Government	553	16.6	1,122	11.7
Teaching status (PPS only)				
Major teaching	296	8.9	1,678	17.6
Other teaching	726	21.8	3,361	35.2
Nonteaching	2,311	69.3	4,521	47.3

Note: PPS (prospective payment system), CAH (critical access hospital). Maryland hospitals are excluded. Large urban areas are those with populations of more than 1 million. Major teaching hospitals are defined by a ratio of at least 0.25 of interns and residents to beds. Other teaching hospitals have a ratio below 0.25. Data are limited to providers with complete 2013 cost reports. See Chart 6-28 for more information about CAHs. Hospitals in urban, rural, tax status, and teaching status categories are all PPS hospitals. Numbers may not sum to totals due to rounding.

Source: MedPAC analysis of PPS impact files and Medicare cost report data from CMS.

- In 2013, 3,333 hospitals provided nearly 9.6 million discharges under Medicare's acute inpatient PPS, and 1,329 CAHs provided nearly 350,000 discharges. The number of PPS discharges continued to decline from 2012 to 2013, in part because of a shift in services to the outpatient setting.

- Approximately 10.4 percent of PPS hospitals are covered by two special payment provisions (rural referral centers (RRCs) and sole community hospitals (SCHs)) intended to help rural facilities that are not CAHs; these facilities account for 8.1 percent of all discharges.

- About 90 percent of rural hospitals were given special payments through either the CAH, SCH, or RRC program in 2013. Collectively, these three types of hospitals provide 79 percent of all rural Medicare discharges (not shown in chart).

Chart 6-5. Major diagnostic categories with highest volume, fiscal year 2013

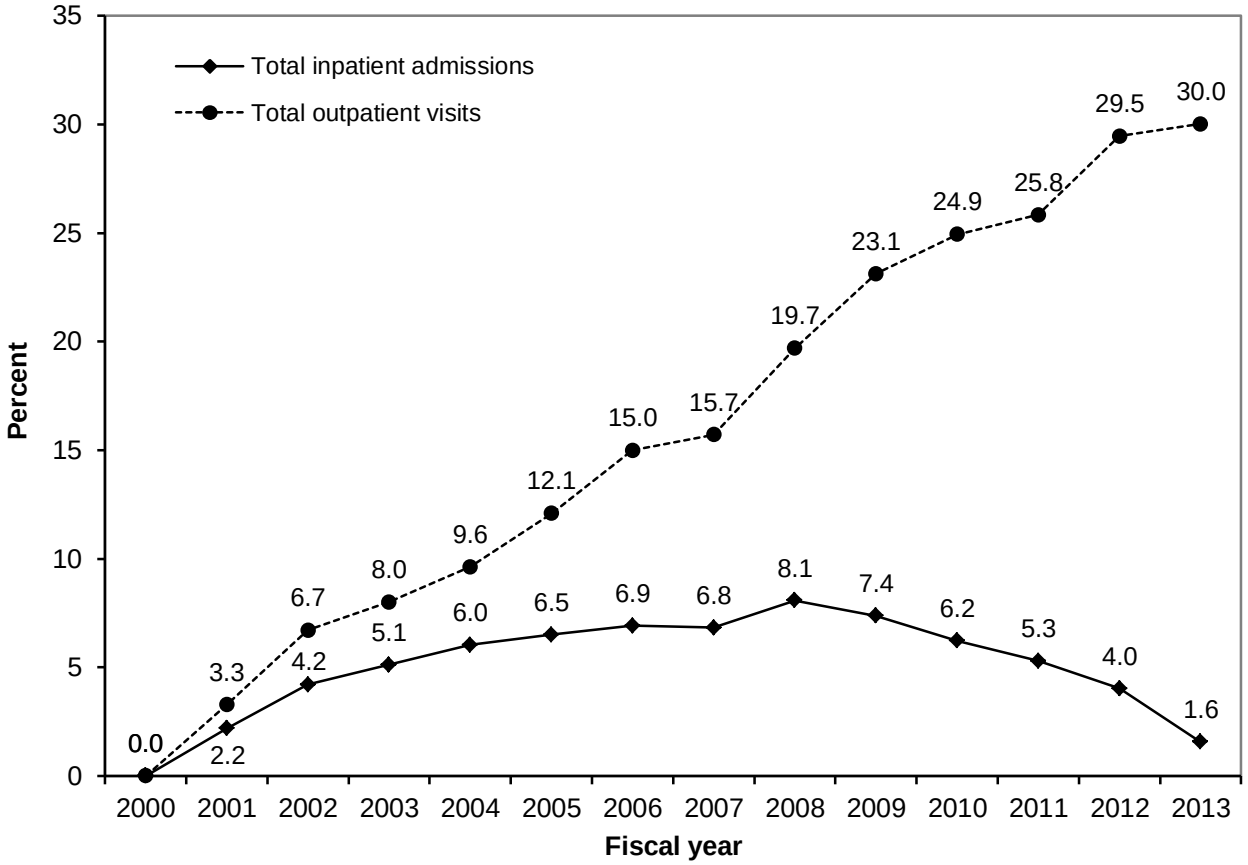
MDC number	MDC name	Share of all discharges	Share of medical discharges	Share of surgical discharges
5	Circulatory system	21%	20%	24%
4	Respiratory system	15	20	3
8	Musculoskeletal system and connective tissue	13	3	39
6	Digestive system	11	11	10
1	Nervous system	8	9	5
11	Kidney and urinary tract	8	9	4
18	Infectious and parasitic diseases	7	8	3
10	Endocrine, nutritional and metabolic system	4	4	2
7	Hepatobiliary system and pancreas	3	3	3
9	Skin, subcutaneous tissue and breast	3	3	2
	Total	91	90	94

Note: MDC (major diagnostic category). Numbers may not sum to totals due to rounding.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- In fiscal year 2013, 10 major diagnostic categories accounted for 91 percent of all discharges from hospitals paid under the acute inpatient prospective payment system.
- Circulatory system cases accounted for about one-quarter of surgical cases and one-fifth of all cases.
- Respiratory system cases accounted for 20 percent of medical discharges.
- Musculoskeletal system cases accounted for 39 percent of surgical discharges.

Chart 6-6. Cumulative change in total all-payer inpatient admissions and outpatient visits, 2000–2013

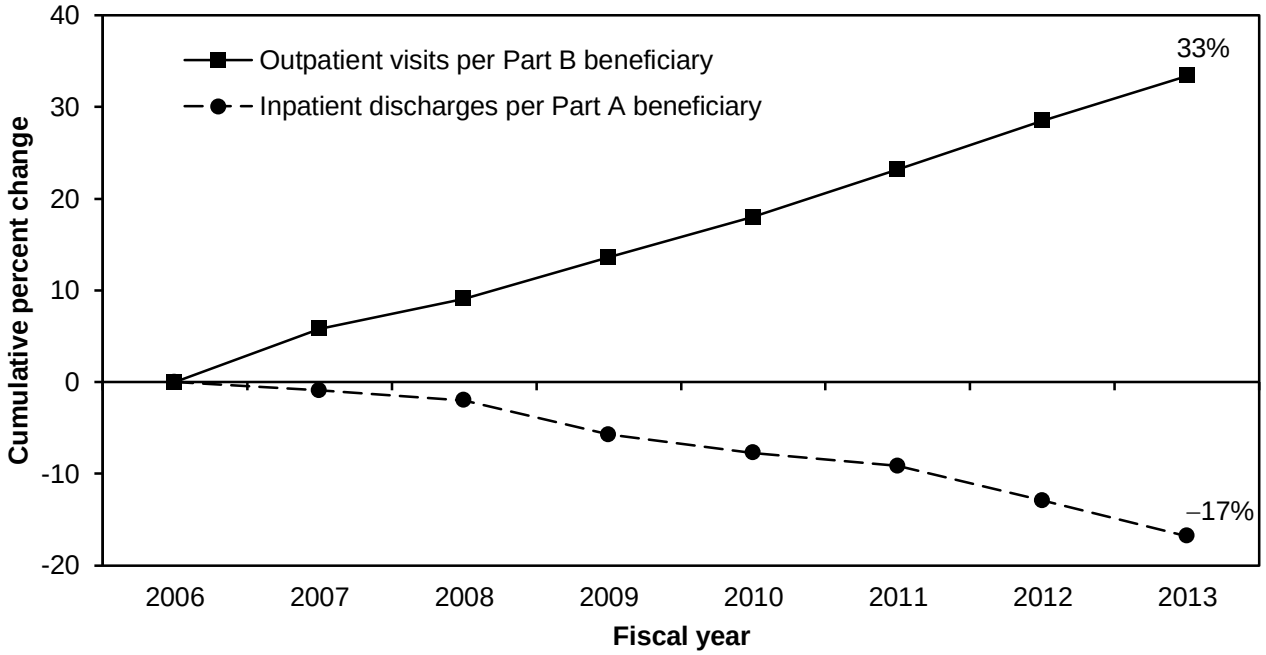


Note: Cumulative change is the total percentage increase from 2000 through 2013. Data are admissions and outpatient visits to about 5,000 community hospitals across all payers.

Source: American Hospital Association, AHA Hospital Statistics.

- In 2013, community hospitals provided nearly 678 million outpatient visits and slightly fewer than 34 million inpatient admissions (data not shown).
- Hospital outpatient service use grew much more rapidly from 2000 to 2013 than inpatient service use. Total hospital outpatient visits increased 30 percent from 2000 to 2013.
- Outpatient visits increased 0.5 percentage points from 2012 to 2013, or by nearly 3 million visits.
- Total inpatient admissions grew by over 8 percent between 2000 and 2008 but have since declined. Inpatient admissions decreased by 2.4 percentage points from 2012 to 2013, or over 800,000 admissions.

Chart 6-7. Cumulative change in Medicare outpatient services and inpatient discharges per FFS beneficiary, 2006–2013

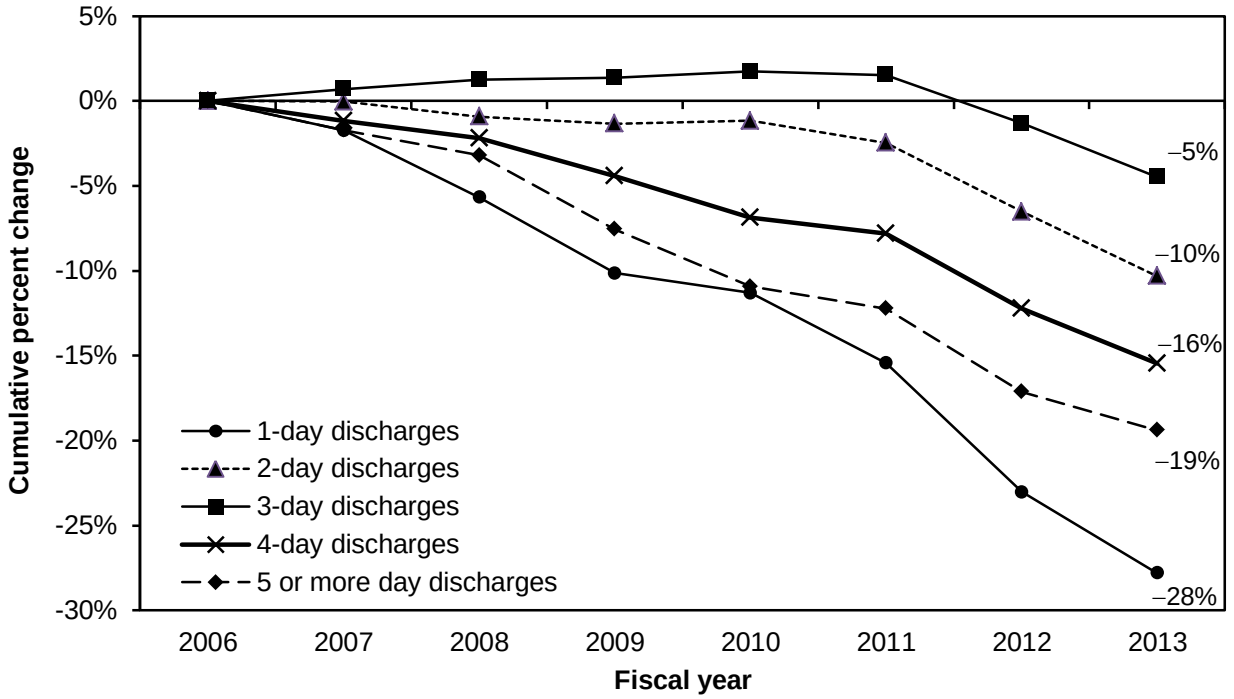


Note: FFS (fee-for-service). Data are for short-term general and surgical hospitals, including critical access and children's hospitals.

Source: MedPAC analysis of Medicare Provider Analysis and Review and hospital outpatient claims data from CMS.

- From 2006 to 2013, the number of Medicare inpatient discharges per FFS beneficiary declined by 17 percent. From 2006 to 2007, inpatient volume per beneficiary was relatively flat, but the volume of discharges began to decline beginning in 2008.
- From 2006 to 2013, the number of outpatient services per FFS beneficiary increased 33 percent.
- Together these two trends suggest a shift in services from the inpatient to the outpatient setting as well as secular trends in increasing outpatient and decreasing inpatient utilization.
- From 2012 to 2013, the number of Medicare inpatient discharges per FFS beneficiary declined approximately 4 percentage points, or approximately twice the average annual decline from 2006 to 2012.
- From 2012 to 2013, the number of Medicare outpatient services per FFS beneficiary increased approximately 4 percentage points, slightly less than the average annual increase from 2006 to 2012.

Chart 6-8. Cumulative change in Medicare inpatient discharges per FFS beneficiary by length of stay, 2006–2013



Note: FFS (fee-for-service). Data are for short-term general and surgical hospitals, including critical access and children's hospitals.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

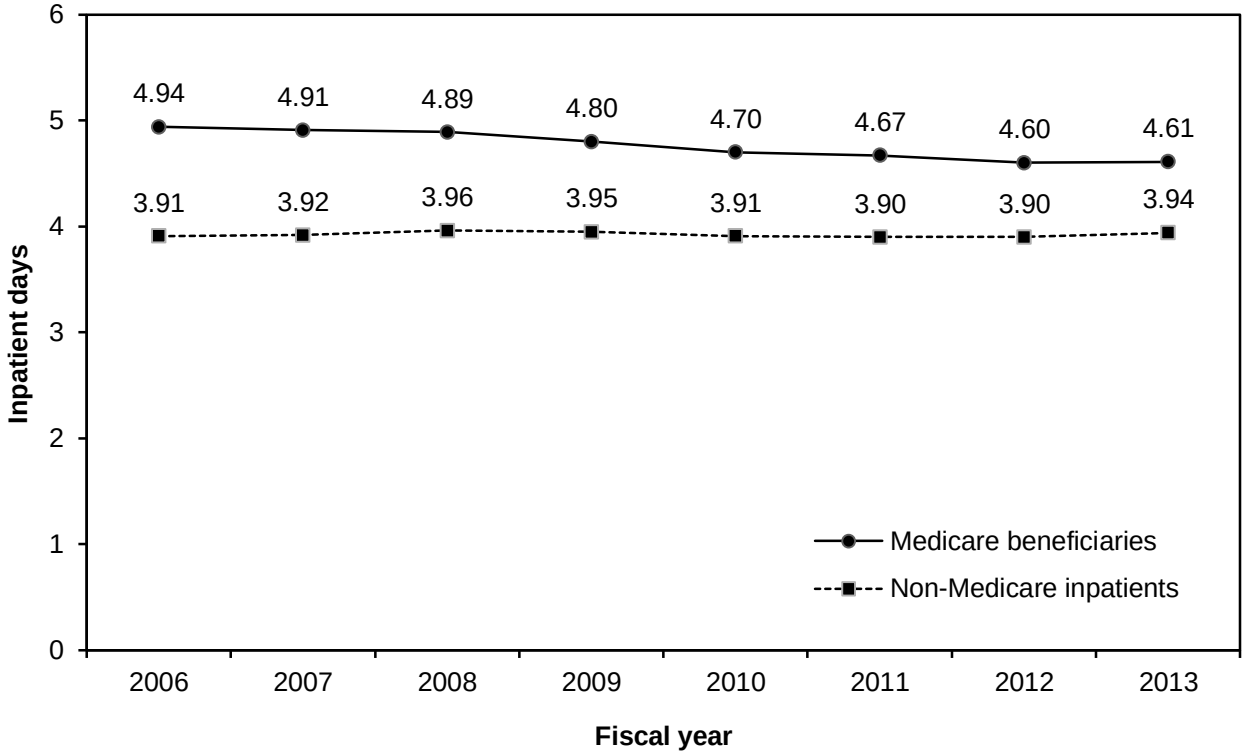
- In recent years, one-day inpatient discharges declined more rapidly than inpatient discharges of greater lengths. From 2006 to 2013, one-day inpatient stays declined nearly 28 percent per FFS beneficiary. In 2013, there were approximately 1.3 million one-day discharges, representing 12 percent of all discharges (data not shown).

- From 2006 to 2013, three-day inpatient stays declined least rapidly. From 2006 to 2011, three-day stays increased. However, three-day inpatient stays began to decline in 2011. In 2013, there were approximately 2 million three-day discharges, representing 18 percent of all discharges (data not shown).

- Collectively, inpatient discharges of five or more days declined rapidly from 2006 to 2013, at 19 percent per beneficiary. Rates of decline for these longer stays varied depending on the number of days, but ranged from 18 percent to 22 percent for the most common lengths (five-day, six-day, seven-day, and eight-day discharges). In 2013, there were approximately 4.7 million discharges of five or more days in length, representing 43 percent of all discharges (data not shown).

- From 2006 to 2013, inpatient surgical discharges per beneficiary declined approximately 23 percent (data not shown), or an average of slightly more than 3 percent per year. Over the same period, inpatient medical discharges per beneficiary declined approximately 14 percent, or an average of 2 percent per year.

Chart 6-9. Trends in Medicare and non-Medicare inpatient length of stay, 2006–2013



Note: Length of stay is calculated from discharges and patient days for more than 3,000 hospitals covered by the acute inpatient prospective payment system. Chart excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data from CMS.

- While Medicare length of stay fell between 2006 and 2013, the average length of stay for non-Medicare inpatients was relatively unchanged.
- The average length of inpatient stays for Medicare beneficiaries was essentially flat between 2012 and 2013, ending a period of several years in which length of stay had been declining. Length of stay fell nearly 7 percent from 2006 to 2012.
- In 2013, the average length of inpatient stays for Medicare beneficiaries was 0.7 of a day longer than for non-Medicare inpatients. In 2006, the difference was more than a full day.

Chart 6-10. Share of inpatient admissions preceded by emergency department visit by hospital group, 2006–2013

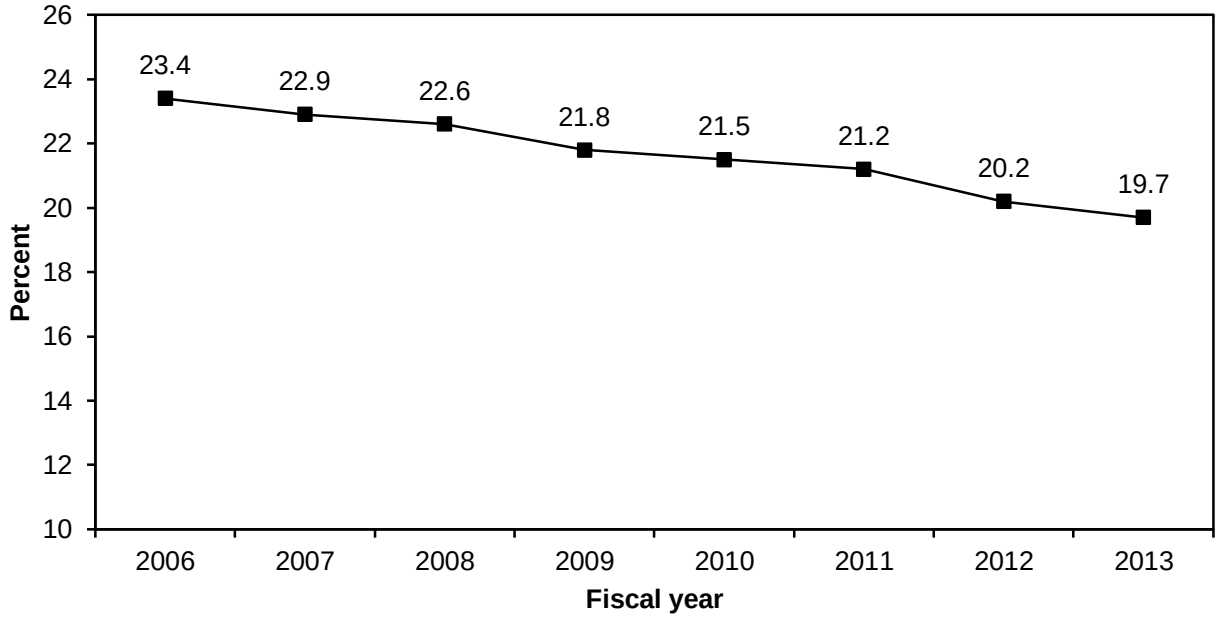
	Percent 2013	Average annual percent change 2006–2012	Percent change 2012–2013
All hospitals	71.2%	1.9%	1.6%
Urban	70.8	2.0	1.5
Large urban	72.6	1.8	1.4
Other urban	68.8	2.2	1.7
Rural	73.8	1.9	2.4
Rural referral	73.1	1.8	2.4
Sole community	73.5	1.8	2.7
Other rural < 50 beds	69.6	1.6	2.0
Other rural ≥ 50 beds	77.4	2.1	2.0
Tax status			
Voluntary	71.2	1.9	1.5
Proprietary	72.0	2.0	1.7
Government	69.7	2.4	2.0
Teaching status			
Major teaching	63.4	1.8	1.3
Other teaching	69.9	2.1	1.5
Nonteaching	75.0	2.0	1.9

Note: Years are fiscal years.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- In 2013, 71.2 percent of inpatient admissions entered the hospital through the emergency department (ED).
- From 2012 to 2013, the share of inpatient admissions entering the hospital through the ED increased 1.6 percent, a slightly slower rate of change than the average annual rate from 2006 to 2012 (1.9 percent). The change from 2012 to 2013 was the result of a decrease of 77,000 inpatient admissions preceded by an ED visit and a decrease of 274,000 inpatient admissions overall.
- The share of inpatient admissions preceded by an ED visit is consistently higher for rural hospitals than for urban hospitals. In 2013, approximately 74 percent of inpatient admissions provided at rural hospitals were preceded by an ED visit. By contrast, approximately 71 percent of inpatient admissions provided at urban hospitals were preceded by an ED visit.

Chart 6-11. Share of Medicare Part A fee-for-service beneficiaries with at least one hospitalization, 2006–2013



Note: Analysis excludes Medicare Advantage claims and claims for non–inpatient prospective payment system hospitals such as critical access hospitals and hospitals located in Maryland.

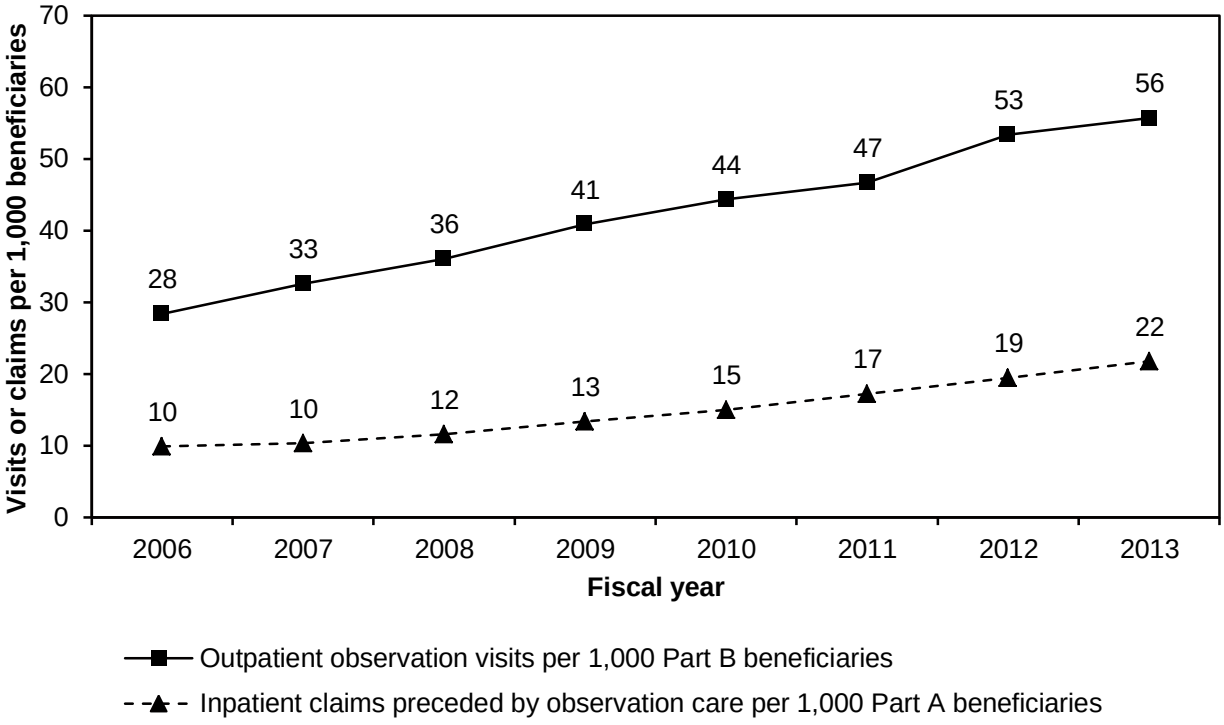
Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- The share of Medicare fee-for-service beneficiaries with Part A coverage who had at least one inpatient hospitalization in a given year declined by nearly 4 percentage points from 2006 to 2013. In 2013, 19.7 percent of Medicare beneficiaries had at least one inpatient stay covered under Part A.

- Medicare fee-for-service beneficiaries with Part A coverage that used inpatient hospital services in 2013 had an average of 1.69 inpatient claims over the course of the year (data not shown). The average number of inpatient claims per inpatient service user declined from 2006 to 2013 by approximately 2 percent, from 1.73 claims per year to 1.69 claims per year.

- A portion of the decline in beneficiaries' use of inpatient services could reflect the increase in the number of cases in which beneficiaries are served in outpatient observation status. In addition, this decline could represent, in part, a secular trend in reduced use of inpatient services.

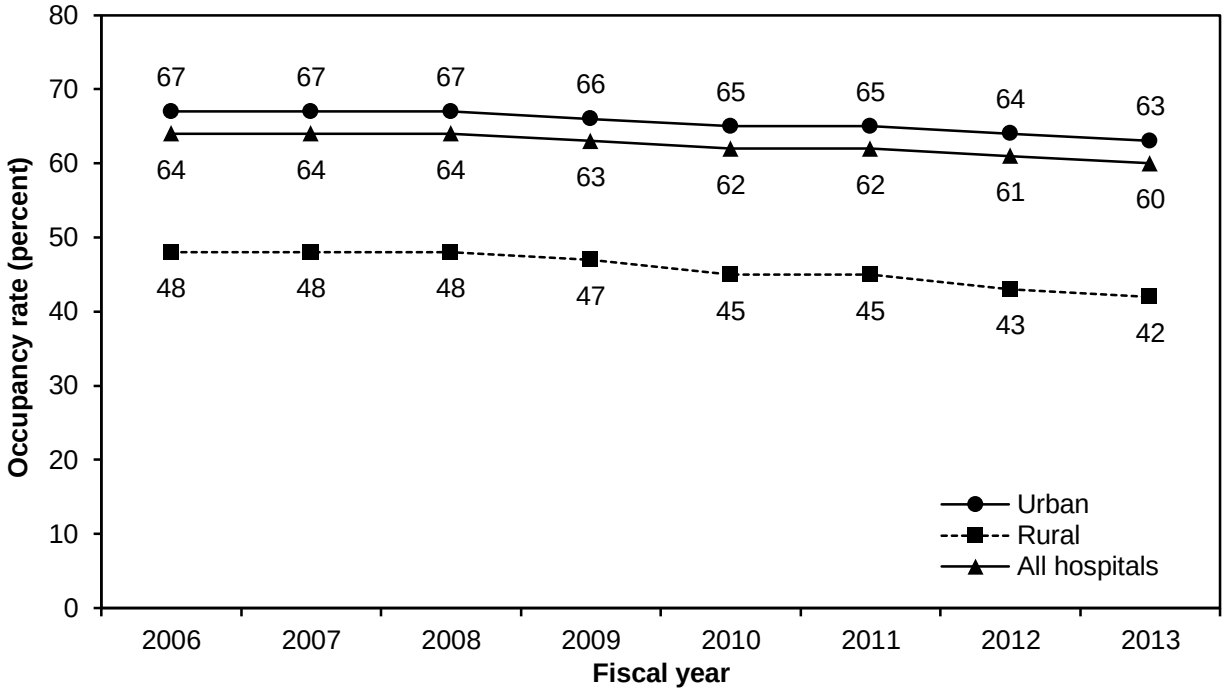
Chart 6-12. Number of Medicare outpatient observation visits and inpatient claims preceded by observation care per 1,000 beneficiaries increased from 2006 to 2013



Source: Medicare hospital cost reports and Medicare outpatient claims data.

- In 2013, approximately 2.6 million observation stays occurred (data not shown). Among this total, approximately 800,000 were observation stays that preceded an inpatient stay, and 1.8 million were exclusively outpatient stays.
- The number of Medicare outpatient observation visits increased approximately 96 percent from 2006 to 2013. During this period, the rate of outpatient observation visits per Part B beneficiary increased from approximately 28 visits per 1,000 beneficiaries to 56 visits per 1,000 beneficiaries.
- The number of Medicare inpatient admissions preceded by observation care increased approximately 120 percent from 2006 to 2013, from 10 inpatient admissions preceded by observation per 1,000 Part A beneficiaries to 22 per 1,000 beneficiaries.
- The length of outpatient observation visits increased in recent years (data not shown). From 2006 to 2013, the average length of outpatient observation visits increased by approximately 4 hours, from 25.6 hours in 2006 to 29.5 hours in 2013. The average length of observation care associated with a corresponding inpatient stay increased less rapidly, from 22.8 hours to 23.3 hours over the same period.
- In 2013, approximately 360,000 observation visits were 48 hours or longer, representing approximately 14 percent of all observation stays (data not shown).

Chart 6-13. Hospital occupancy rates, 2006–2013



Note: Hospital occupancy rates were defined as total bed days used (including swing bed days) and observation bed days used, minus nursery bed days used, over total bed days available. A consistent cohort of approximately 3,300 prospective payment system and critical access hospitals was used in this analysis.

Source: MedPAC analysis of Medicare's Hospital Cost Reports.

- In the aggregate, hospital occupancy rates have been relatively stable over the past decade but have edged down slightly in more recent years as total inpatient admissions have fallen. In 2013, occupancy rates were 60 percent across all hospitals, their lowest level in the past 12 years.

- Occupancy rates are generally higher for urban than for rural hospitals. In 2013, the aggregate occupancy rate for urban hospitals was 63 percent and the aggregate occupancy rate for rural hospitals was 42 percent.

- The decline in occupancy rates from 2006 to 2013 has been more rapid for rural hospitals than for urban hospitals. During this period, rural occupancy rates declined 6 percentage points and urban occupancy rates declined nearly 4 percentage points.

- Occupancy rates vary across markets and are inversely correlated with the number of beds per capita in a market (data not shown). For example, the average occupancy rate for hospitals in Seattle, WA, was 67 percent in 2013 compared with an average occupancy rate of 57 percent for hospitals in Jackson, MS. The 10 metropolitan areas with the lowest number of beds per capita had an average occupancy rate of 60 percent, and the 10 markets with the highest number of beds per capita had an average occupancy rate of 56 percent.

Chart 6-14. Medicare inpatient payments, by source and hospital group, 2013

Hospital group	Percent of total payments					Total payments (millions)
	Base	IME	DSH	Outlier	Additional rural hospital*	
All hospitals	79.9%	5.2%	9.7%	3.8%	1.7%	$112,168
Urban	79.6	5.6	10.2	4.1	0.8	102,759
Rural	82.4	0.8	5.1	1.1	11.4	9,409
Large urban	77.9	6.9	10.8	4.6	0.2	58,506
Other urban	81.9	4.0	9.5	3.5	1.3	42,788
Rural referral	88.3	1.4	8.3	2.1	0.2	2,891
SCH (federal rate)	84.5	3.4	8.1	1.6	2.6	1,363
SCH (HSP rate)	76.3	0.1	0.0	0.3	25.1	3,408
Medicare dependent	79.9	0.1	7.4	1.2	11.8	1,313
Other rural < 50 beds	83.0	0.1	6.9	1.2	8.9	310
Other rural ≥ 50 beds	89.0	0.5	7.5	1.6	1.8	1,304
Voluntary	80.4	5.5	9.0	3.9	1.5	80,221
Proprietary	83.2	1.9	11.0	2.8	1.3	17,723
Government	72.7	7.5	12.4	4.8	2.9	14,224
Major teaching	66.2	15.9	12.3	5.8	0.1	27,929
Other teaching	82.1	3.6	10.0	3.5	1.1	39,256
Nonteaching	86.4	0.0	8.0	3.0	3.1	44,984

Note: IME (indirect medical education), DSH (disproportionate share), SCH (sole community hospital), HSP (hospital-specific payment [rate]). Chart includes hospitals covered by the inpatient prospective payment system and excludes critical access hospitals. The "Medicare-dependent" hospital category includes facilities paid at either the HSP or the federal rate. Rows may not sum to totals due to rounding. Simulated payments reflect 2013 payment rules applied to actual number of cases in 2013. Direct graduate medical education payments are excluded.
*"Additional rural hospital payments" are the total payments made to hospitals beyond the federal base rate, including SCH add-on payments, Medicare-dependent hospital add-on payments, and low-volume add-on payments; for SCHs paid the HSP, this category also includes the payments they received indirectly attributable to the costs associated with residency programs, low-income patients, and outlier cases.

Source: MedPAC analysis of claims and impact file data from CMS.

- Medicare inpatient payments in 2013 to hospitals covered by the acute inpatient prospective payment system (IPPS) exceeded $112 billion. About $103 billion (92 percent) went to urban hospitals, and about $9 billion went to rural hospitals. This figure does not reflect $2.7 billion in payments to critical access hospitals (CAHs) for inpatient care. Cost-based reimbursement for CAHs results in payments that are significantly above what CAHs would have been paid under the IPPS.

- Base payments accounted for 79.9 percent of all inpatient payment in 2013. Special payments—including IME, DSH, and outlier payments, as well as additional payments to rural hospitals through the SCH and Medicare-dependent hospital programs—accounted for 20.1 percent of all inpatient payments.

- In 2013, additional payments to rural hospitals amounted to 1.7 percent of inpatient payments, or approximately $1.9 billion.

- Outlier payments accounted for 3.8 percent of total inpatient payments in 2013.

Chart 6-15. Discharge destination of Medicare fee-for-service beneficiaries, 2006–2013

Destination	2006	2009	2012	2013	Percentage point change 2006–2013
Home self-care	52.3%	50.1%	48.0%	46.9%	–5.4%
Skilled nursing or swing bed	18.8	19.8	20.3	20.6	1.8
Home with organized home health care	13.8	15.2	15.9	16.7	2.9
Inpatient rehabilitation facility	3.4	3.3	3.5	3.5	0.1
Long-term care hospital	0.9	1.1	1.2	1.2	0.3
Inpatient psychiatric facility	0.4	0.5	0.5	0.5	0.1
Hospice	1.6	2.1	2.7	2.8	1.2
Other setting (e.g., ICF, nursing facility)	2.0	1.6	1.7	1.6	–0.4
Transferred to other acute care hospital	2.5	2.2	2.2	2.1	–0.3
Left against medical advice	0.6	0.7	0.8	0.8	0.1
Died in hospital	3.8	3.5	3.3	3.4	–0.4

Note: ICF (intermediate care facility).

Source: Medicare inpatient claims data.

- In 2013, 46.9 percent of all Medicare fee-for-service patients were discharged from an acute-care hospital to home under self-care, without any organized post-acute care. The share of beneficiaries discharged home under self-care has decreased since 2006 with greater use of different post-acute care providers, particularly home health care, skilled nursing care, and hospice.

- About one in five beneficiaries are discharged to skilled nursing care, ether in a skilled nursing facility (SNF) or hospital swing bed. The share of beneficiaries being discharged to SNF-level care increased 1.8 percentage points between 2006 and 2013.

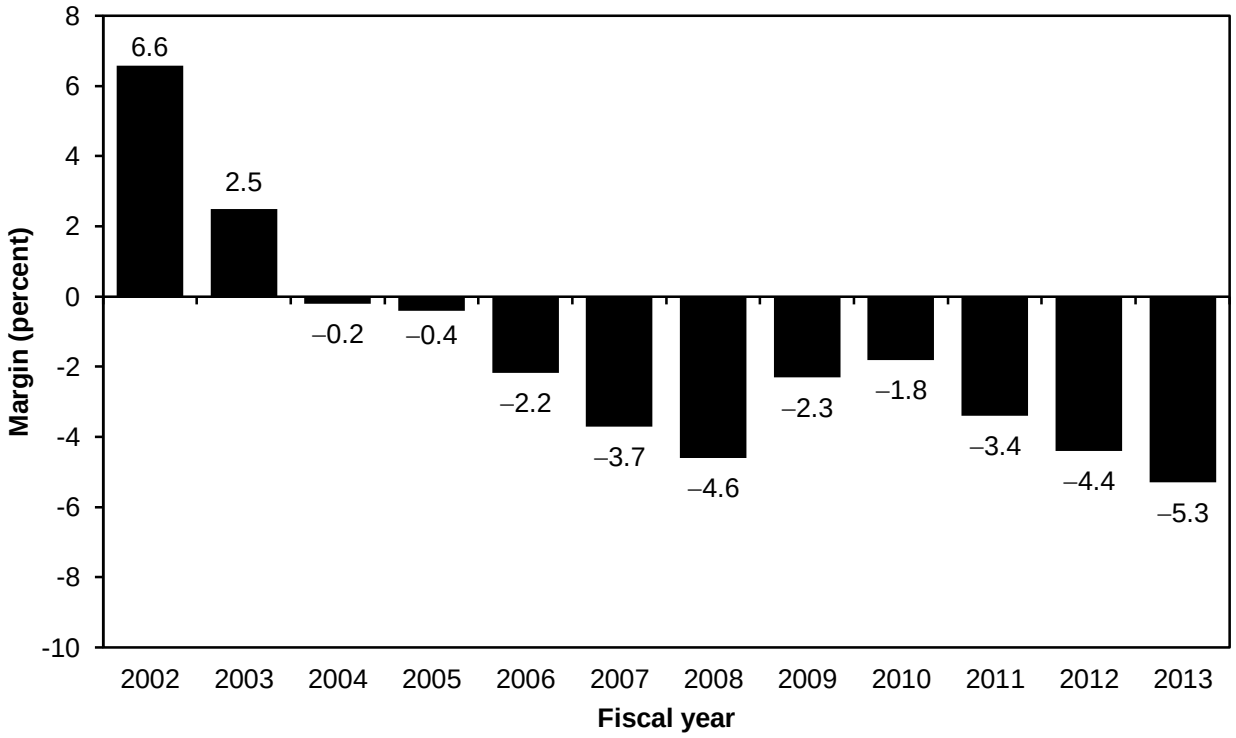
- An increasing share of beneficiaries are being discharged home with organized home health care, going from 13.8 percent of discharges in 2006 to 16.7 percent in 2013.

- About 5 percent of beneficiaries are discharged to hospital-level post-acute care in an inpatient rehabilitation facility (3.5 percent), long-term care hospital (1.2 percent) or inpatient psychiatric facility (0.5 percent).

- Discharges to hospice care have shown substantial growth, rising from 1.6 percent of discharges in 2006 to 2.8 percent of discharges in 2013. A little more than half of these hospice discharges are to medical facility–level care rather than to home care.

- The share of patients dying in the hospital or being transferred to another acute care hospital has been declining.

Chart 6-16. Medicare acute inpatient PPS margin, 2002–2013



Note: PPS (prospective payment system). A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. The Medicare acute inpatient margin includes services covered by the acute care inpatient PPS. Maryland hospitals are excluded from this analysis.

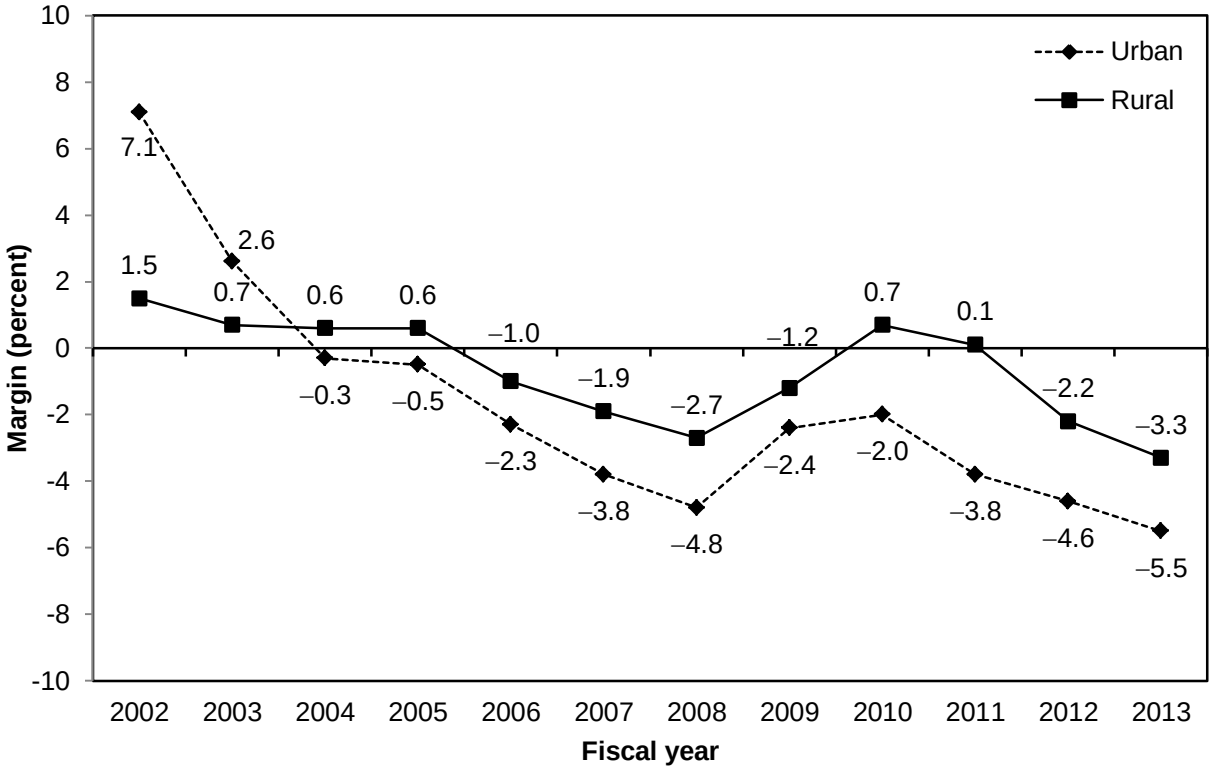
Source: MedPAC analysis of Medicare cost report data from CMS.

- Medicare's acute inpatient margin reflects payments and costs for services covered by Medicare's inpatient hospital PPS. The inpatient margin may be influenced by how hospitals allocate overhead costs across service lines. Only by combining data for all major services can we estimate Medicare costs without the potential influence of how overhead costs are allocated (see Chart 6-18).

- Following implementation of the Balanced Budget Act of 1997, inpatient margins declined over the next 10 years as costs rose faster than the 3 percent average annual increase in Medicare payments. In 2013, the margin was –5.3 percent, down from –4.4 percent in 2012.

- Medicare inpatient margins vary widely. In 2013, one-quarter of hospitals had Medicare inpatient margins that were 4.9 percent or higher, and another one-quarter had inpatient margins that were –21.8 percent or lower (data not shown). Thirty-five percent of hospitals had positive inpatient Medicare margins in 2013.

Chart 6-17. Medicare acute inpatient PPS margin, by urban and rural location, 2002–2013



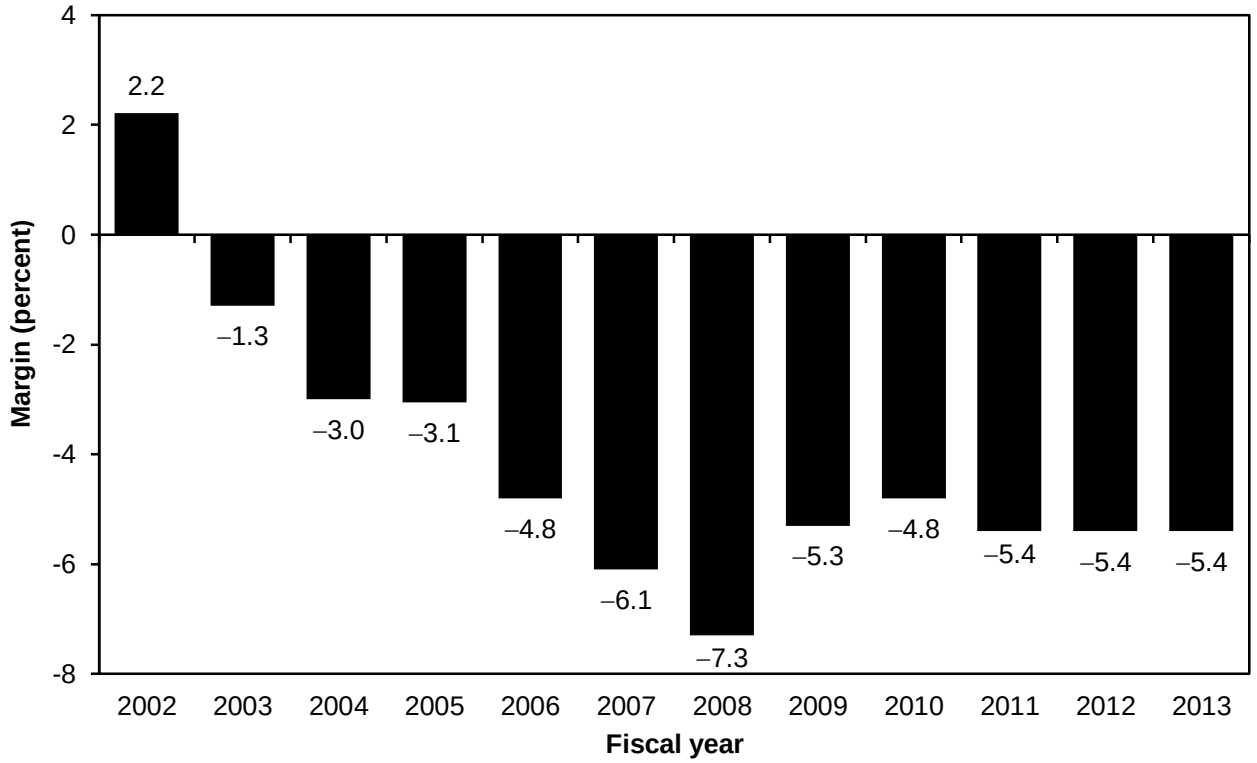
Note: PPS (prospective payment system). A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. The Medicare acute inpatient margin includes services covered by the acute care inpatient PPS. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of Medicare cost report data from CMS.

- Urban hospitals have historically had higher Medicare inpatient margins than rural hospitals (not shown in chart), but the gap narrowed in 2002 and 2003. One factor in this gap was that urban hospitals had greater success in controlling cost growth, at least partly in response to pressures from managed care. Since 2004, however, rural hospitals' inpatient margins have been higher than those for urban hospitals.

- In 2013, the Medicare inpatient margins of rural and urban hospitals were –3.3 percent and –5.5 percent, respectively. The narrowing and subsequent reversal of margin trends between these two groups of hospitals since 2002 were the result of payment policies targeted at raising rural hospital payments as well as growth in the number of critical access hospitals, which removed many rural hospitals with low margins from the PPS.

Chart 6-18. Overall Medicare margin, 2002–2013



Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services, as well as graduate medical education and bad debts. Maryland hospitals are excluded from this analysis.

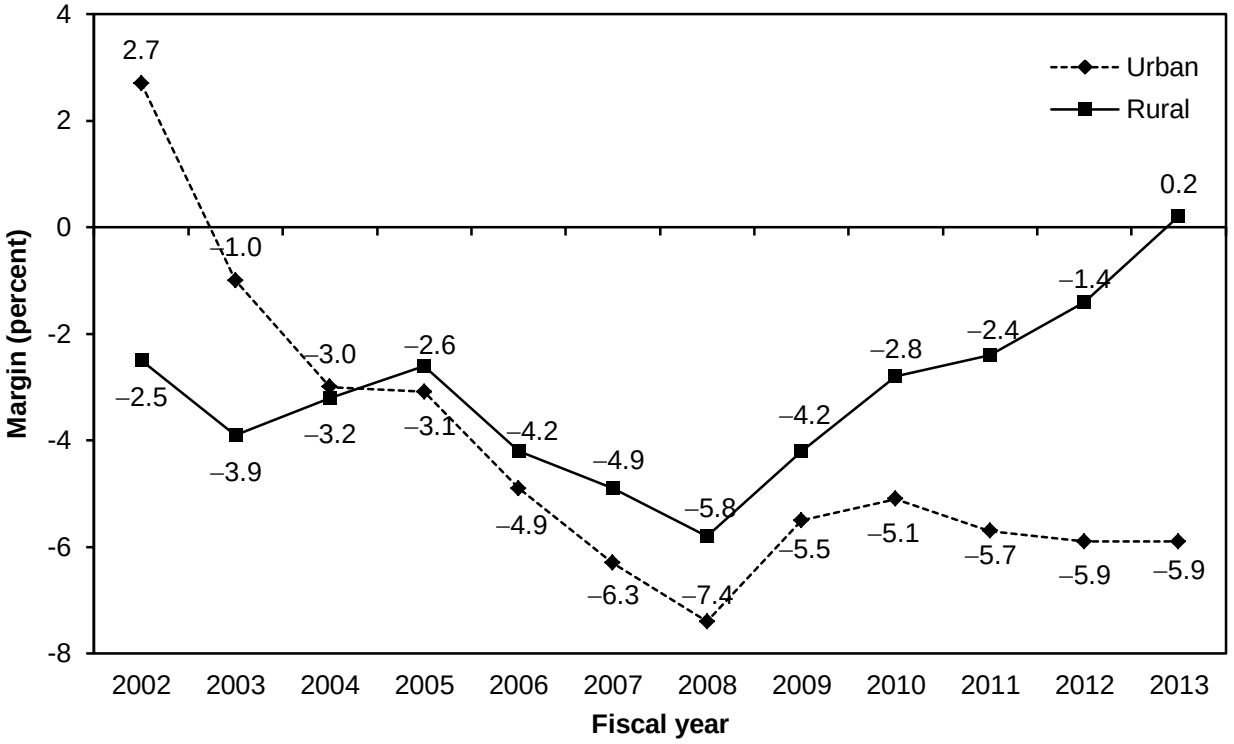
Source: MedPAC analysis of Medicare cost report data from CMS.

- The overall Medicare margin incorporates payments and costs for acute inpatient, outpatient, skilled nursing, home health care, and inpatient psychiatric and rehabilitative services, as well as direct graduate medical education, bad debts, and Medicare payments for health information technology. The overall margin follows a trend similar to that for the Medicare inpatient margin.

- The overall Medicare margin in 2002 was 2.2 percent. In fiscal year 2013, it was –5.4 percent.

- In 2013, 25 percent of hospitals had overall Medicare margins of 7.2 percent or higher, and another 25 percent had margins of –15.0 percent or lower. About 41 percent of hospitals had positive overall Medicare margins in 2013.

Chart 6-19. Overall Medicare margin, by urban and rural location, 2002–2013



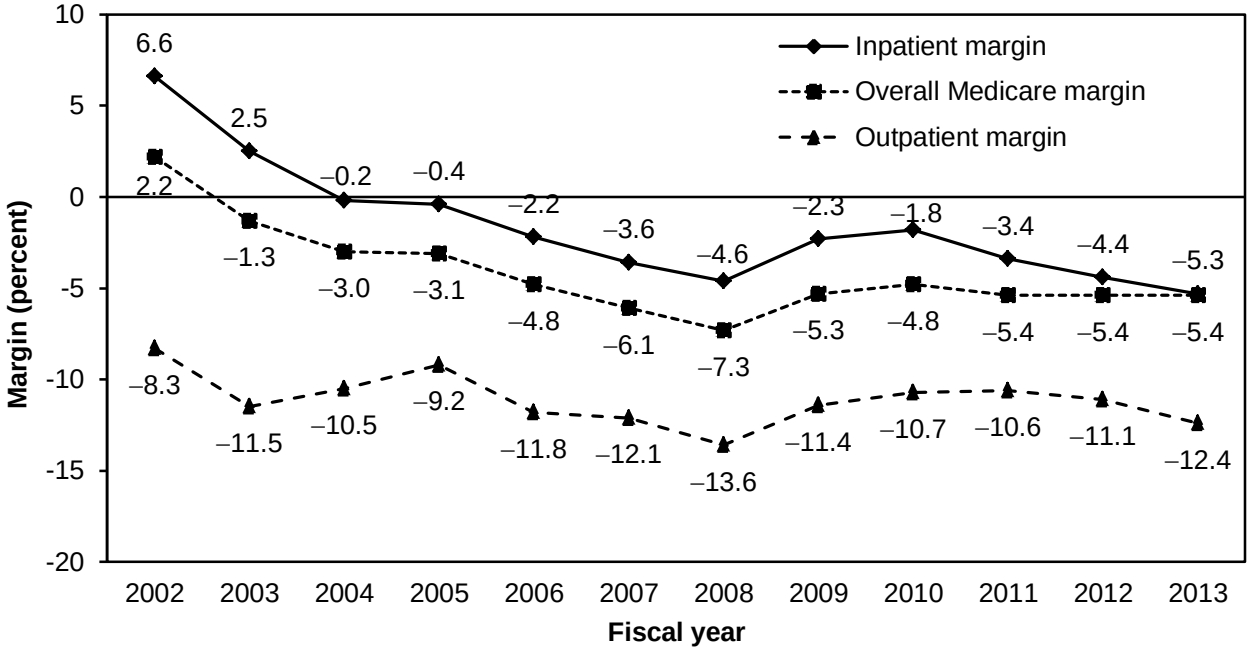
Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute hospital inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services, as well as direct graduate medical education and bad debts. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of Medicare cost report data from CMS.

- As with inpatient margins, overall Medicare margins historically were higher for urban hospitals than for rural hospitals, but since 2005, overall Medicare margins for rural hospitals have exceeded those for urban hospitals, and the difference has widened to about 6 percentage points in 2013.

- The difference in overall Medicare margins between urban and rural hospitals narrowed throughout the middle of the past decade. In 2002, the overall margin for urban hospitals was 2.7 percent compared with –2.5 percent for rural hospitals. In 2004, the overall Medicare margin for urban hospitals was –3.0 percent compared with –3.2 percent for rural hospitals. Most recently, in 2013, the overall Medicare margin for urban hospitals was –5.9 percent compared with 0.2 percent for rural hospitals. Policy changes made in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 helped to improve the relative financial position of rural hospitals. Further legislation to assist rural hospitals was implemented after 2008. Payments for health information technology adoption also helped to push the overall Medicare margins to 0.2 percent in 2013.

Chart 6-20. Medicare hospital outpatient, inpatient, and overall Medicare margins, 2002–2013

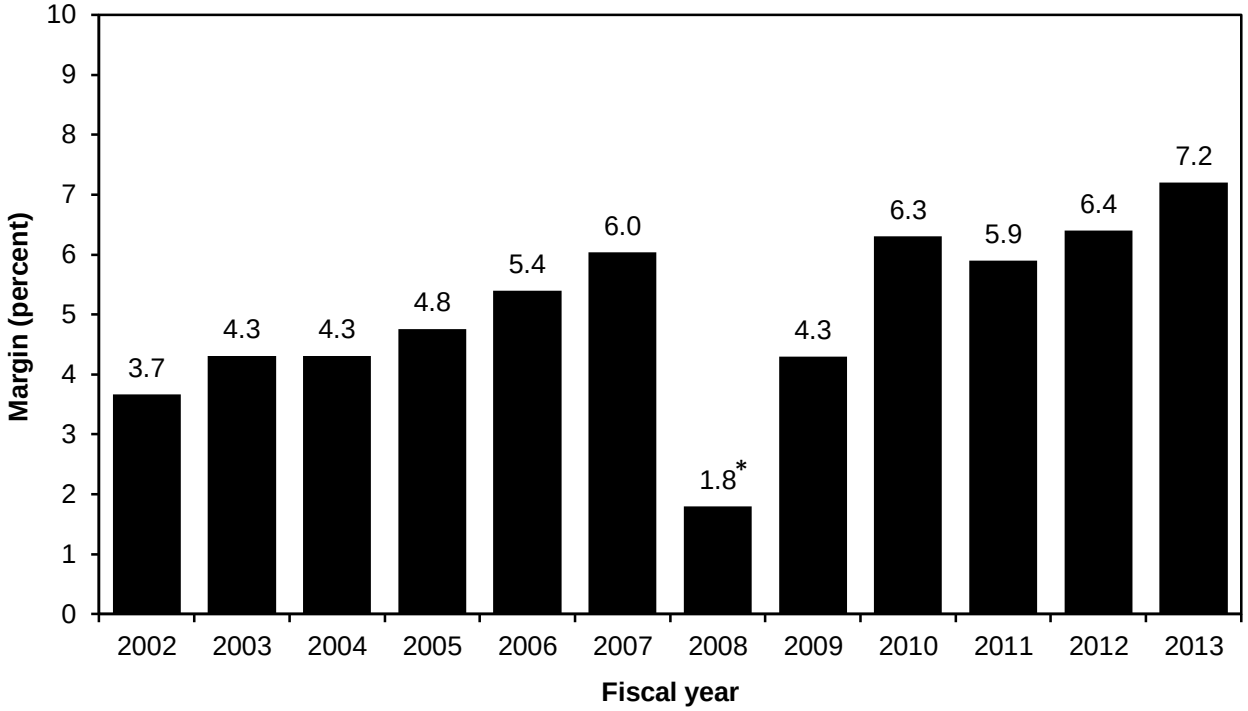


Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs. Analysis excludes critical access hospitals. "Overall Medicare margins" includes the costs and payments of hospital inpatient, outpatient, psychiatric, and rehabilitation services (not paid under the prospective payment system); hospital-based skilled nursing facilities and home health services; and graduate medical education. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of Medicare cost report data from CMS.

- In 2013, while the aggregate overall Medicare margin was –5.4 percent, one-quarter of hospitals had margins of –15.0 percent or lower, and one-quarter had margins of 7.2 percent or higher.
- Hospitals' overhead costs are allocated across different types of services (e.g., inpatient and outpatient). Therefore, margins for hospital inpatient and outpatient services must be considered in the context of Medicare payments and hospital costs for the full range of services provided to Medicare beneficiaries, or what we refer to as the overall Medicare margin.
- Inpatient margins are higher than outpatient margins because of indirect medical education and disproportionate share add-on payments, which increased inpatient payments by roughly 15 percent in 2012.
- In 2013, one-quarter of hospitals had outpatient margins of 2.0 percent or higher, and another one-quarter had margins of –25.0 percent or lower (data not shown). About 29 percent of hospitals had positive outpatient margins in 2013.

Chart 6-21. Hospital total all-payer margin, 2002–2013



Note: A margin is calculated as revenue minus costs, divided by revenue. "Total margin" includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals. Maryland hospitals are excluded from this analysis.
*The significant drop in total margin includes investment losses stemming from the decline of the U.S. stock market in 2008.

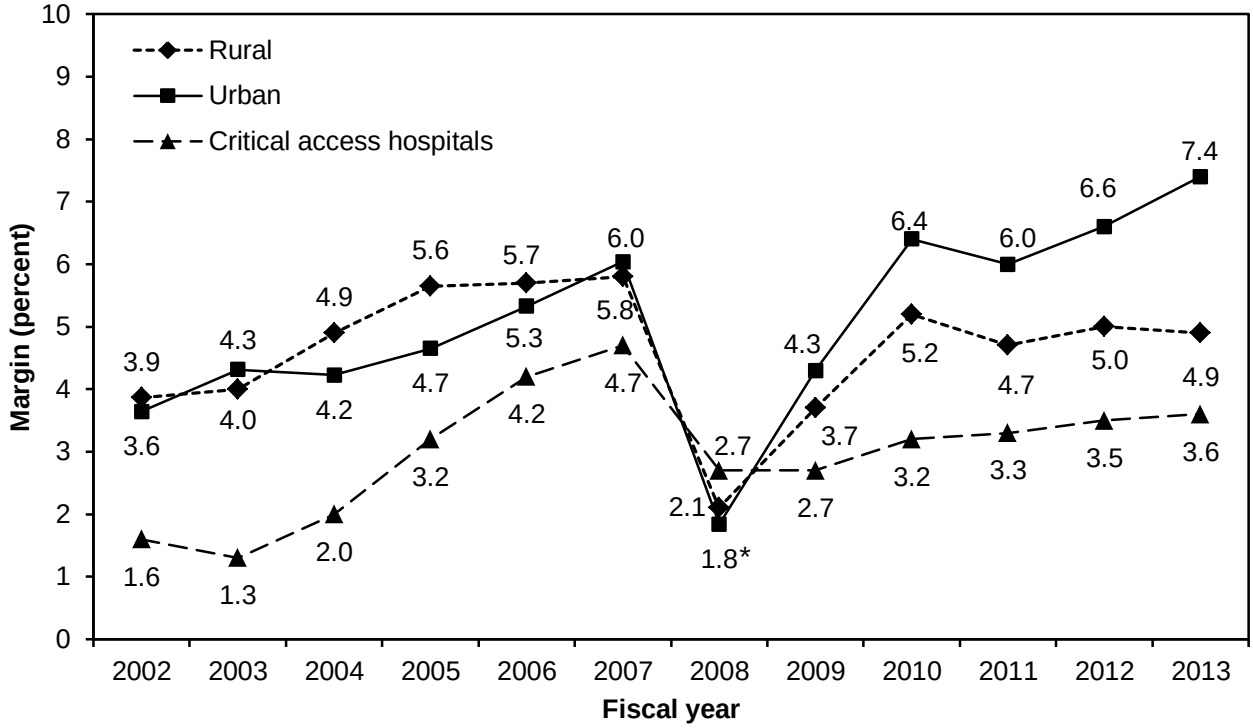
Source: MedPAC analysis of Medicare cost report data from CMS.

- The total hospital margin for all payers—Medicare, Medicaid, other government, and private payers—reflects the relationship of all hospital revenues to all hospital costs, including inpatient, outpatient, post-acute, and nonpatient services. The total margin also includes nonpatient revenue such as investment income. Other types of margins we track—Medicare inpatient margin and overall Medicare margin—are operating margins that do not include investment income.

- From 2002 to 2007, total margins increased to the highest level in a decade. In 2008, the total margin declined to 1.8 percent. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which resulted in a corresponding decline in total margin. In 2013, total margins increased to 7.2 percent from 6.4 percent in 2012, reaching their highest levels since we started tracking total all-payer margins.

- In 2013, 73 percent of hospitals had positive total margins. The total margin varied much less than the Medicare inpatient or overall Medicare margin (data not shown). In 2013, one-quarter of hospitals had total margins that were 10.6 percent or higher, while another one-quarter had margins that were –0.5 percent or lower, a spread of 11 percentage points compared with a 27 percentage point interquartile spread for Medicare inpatient margins and a 22 percentage point interquartile spread for overall Medicare margins.

Chart 6-22. Hospital total all-payer margin, by urban and rural location and critical access hospitals, 2002–2013



Note: A margin is calculated as revenue minus costs, divided by revenue. "Total margin" includes all patient care services funded by all payers, plus nonpatient revenue such as investment revenues. Maryland hospitals are excluded from this analysis.
* Significant drop in total margin includes investment losses resulting from the U.S. stock market decline of 2008.

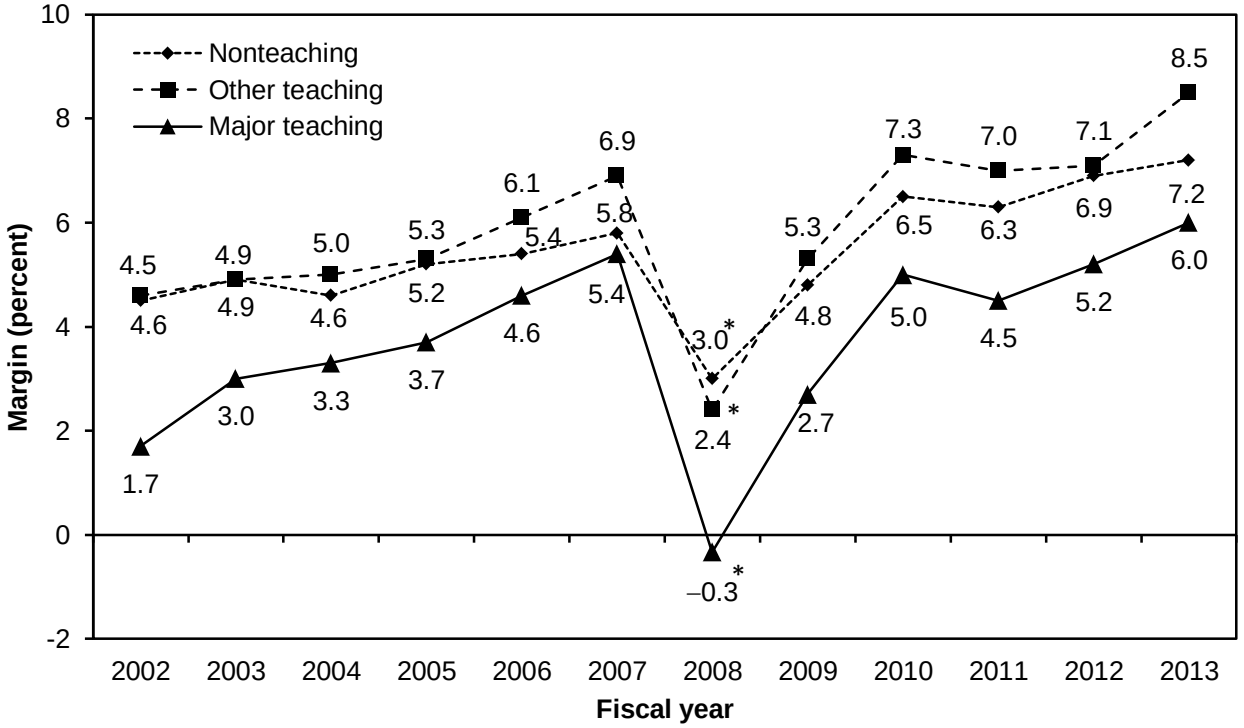
Source: MedPAC analysis of Medicare cost report data from CMS.

- Since 2009, urban hospitals have had higher total (all-payer) margins than rural hospitals. In 2013, total margins were 7.4 percent for urban hospitals and 4.9 percent for rural hospitals. From 2009 to 2013, the growth in urban and rural total all-payer margins reflects low cost growth and increasing private payer reimbursement rates.

- In 2008, both rural and urban hospitals experienced their lowest level of total (all-payer) margins in the past 15 years. Hospitals' total margins include all patient care services funded by all payers, plus nonpatient revenue such as investment revenue. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which in turn resulted in a corresponding decline in total margins. Other types of margins we track—Medicare inpatient margin and overall Medicare margin—are operating margins that do not include investment income.

- Historically, all-payer margins for critical access hospitals have been lower than for urban or other rural hospitals.

Chart 6-23. Hospital total all-payer margin, by teaching status, 2002–2013



Note: Major teaching hospitals are defined by a ratio of 0.25 or greater of interns and residents to beds, while other teaching hospitals have a ratio of greater than 0 and less than 0.25. A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals. Maryland hospitals are excluded from this analysis.
*Significant drop in total margin includes investment losses resulting from the U.S. stock market decline of 2008.

Source: MedPAC analysis of Medicare cost report data from CMS.

- The total all-payer margins for major teaching hospitals have consistently been lower than those for other teaching and nonteaching hospitals. In 2013, the total margin for major teaching hospitals stood at 6.0 percent compared with other teaching hospitals and nonteaching hospitals at 8.5 percent and 7.2 percent, respectively.

- Beginning in 2002, major teaching hospitals' total (all-payer) margins steadily increased, reaching 5.4 percent in 2007. However, in 2008, this trend was interrupted by a steep decline in their investment revenues, resulting in a negative total margin. Since then, total margins have recovered and remain above their historic average.

Chart 6-24. Medicare margins by teaching and disproportionate share status, 2013

Hospital group	Share of hospitals	Share of Medicare inpatient payments	Medicare inpatient margin	Overall Medicare margin
All hospitals	100%	100%	–5.3%	–5.4%
Major teaching	10	29	2.3	–3.6
Other teaching	21	32	–5.8	–5.0
Nonteaching	69	40	–10.4	–6.8
Both IME and DSH	28	56	–1.0	–3.7
IME only	4	4	–15.5	–13.2
DSH only	53	32	–8.1	–5.3
Neither IME nor DSH	15	7	–20.6	–13.7

Note: IME (indirect medical education), DSH (disproportionate share). Numbers may not sum to totals due to rounding. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of 2013 Medicare cost report data from CMS.

- By contrast with all-payer total margins, major teaching hospitals had the highest Medicare inpatient and overall Medicare margins in 2013. Their better financial performance was largely due to the additional payments they received from the IME and DSH adjustments to their inpatient payments.

- Hospitals that received neither IME nor DSH payments had the lowest Medicare margins. In 2013, the Medicare inpatient margin of these hospitals was about –20.6 percent, well below the margins of major teaching hospitals (2.3 percent) and the all-hospital average (–5.3 percent).

- The pattern of Medicare inpatient and overall Medicare margins by teaching status—major teaching hospitals have higher Medicare margins than other hospitals—is the opposite of the pattern for total margins by teaching status—major teaching hospitals have lower total (all-payer) margins than other hospitals (see Chart 6-23).

Chart 6-25. Financial pressure leads to lower costs

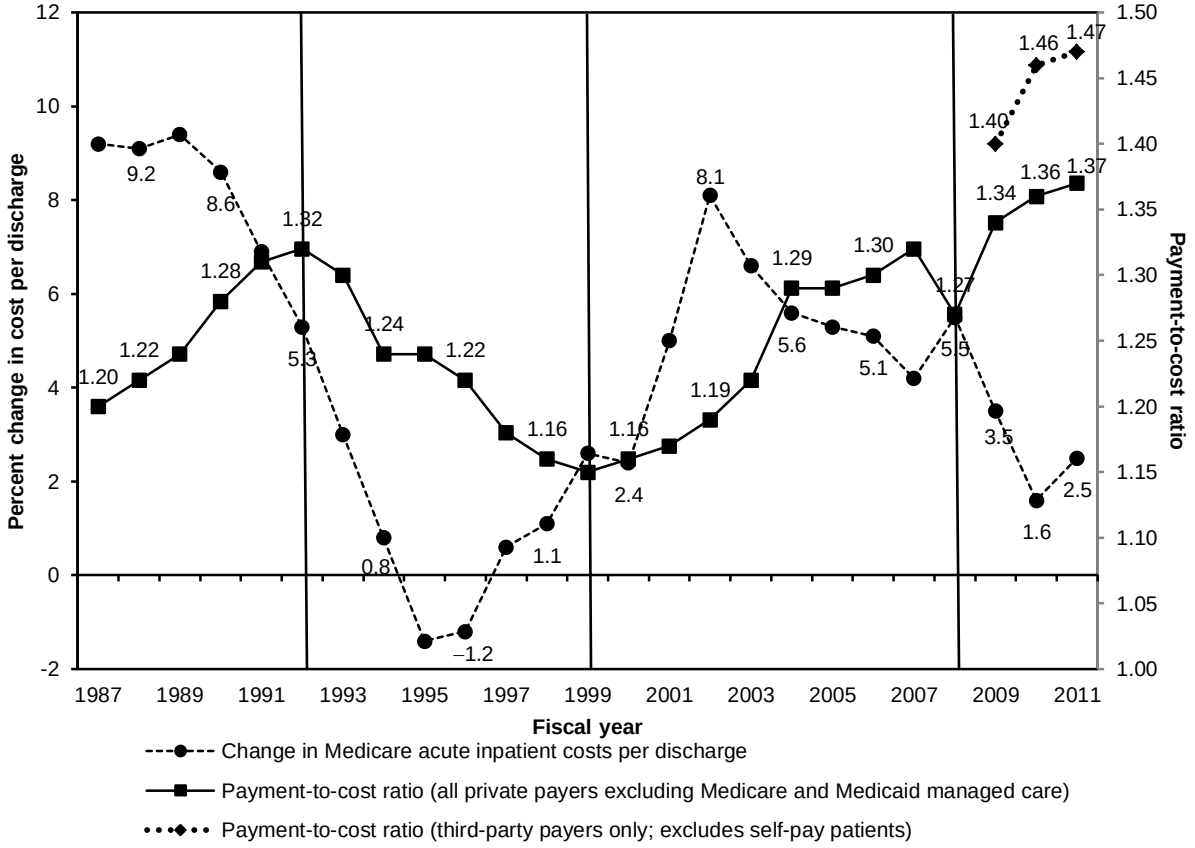
	Level of financial pressure, 2008–2012		
	High pressure (non-Medicare margin ≤ 1%)	Medium pressure	Low pressure (non-Medicare margin > 5%)
Number of hospitals	685	445	1,614
Financial characteristics, 2013 (medians)			
Non-Medicare margin (private, Medicaid, uninsured)	–2.8%	3.4%	13.3%
Standardized cost per discharge (as a share of the national median)			
For-profit and nonprofit hospitals	95	98	105
Nonprofit hospitals	95	101	107
For-profit hospitals	94	95	102
Annual growth in cost per discharge, 2010–2013	4%	3%	3%
Overall 2012 Medicare margin (medians)	4%	–3%	–9%
Patient characteristics (medians)			
Total hospital discharges in 2012	4,563	6,899	7,036
Medicare share of inpatient days	41%	40%	40%
Medicaid share of inpatient days	10	9	8
Medicare case-mix index	1.37	1.48	1.55

Note: Standardized costs are adjusted for hospital case mix, wage index, outliers, transfer cases, interest expense, and the effect of teaching and low-income Medicare patients on hospital costs. The sample includes all hospitals that had complete cost reports on file with CMS by October 2014. A "high-pressure hospital" is one with a median non-Medicare profit margin of 1 percent or less from 2008 to 2012 and a net worth that grew by less than 1 percent per year from 2008 to 2012 if the hospital's Medicare profits had been zero. A "low-pressure hospital" is one with a median non-Medicare profit margin greater than 5 percent from 2008 to 2012 and a net worth that grew by more than 1 percent per year from 2008 to 2012 if the hospital's Medicare profits had been zero. Hospitals are categorized as "medium-pressure" if they fit into neither the high- nor the low-pressure categories.

Source: MedPAC analysis of Medicare cost report and claims files from CMS.

- Higher financial pressure tends to lead to lower standardized cost per discharge and higher Medicare margins. Hospitals with a lower inpatient volume and a lower case mix are more likely to be under financial pressure.

Chart 6-26. Change in Medicare hospital inpatient costs per discharge and private payer payment-to-cost ratio, 1987–2011



Note: Data are for community hospitals (including critical access hospitals and Maryland hospitals) and cover all hospital services. Imputed values were used for missing data (about one-third of observations). Data for 2006–2010 exclude Medicare and Medicaid managed care patients from the private payment-to-cost ratio. The private payment-to-cost ratio includes self-pay patients.

Source: MedPAC analysis of Medicare Cost Report files from CMS and CMS's rules for the acute inpatient prospective payment system and American Hospital Association Annual Survey of Hospitals.

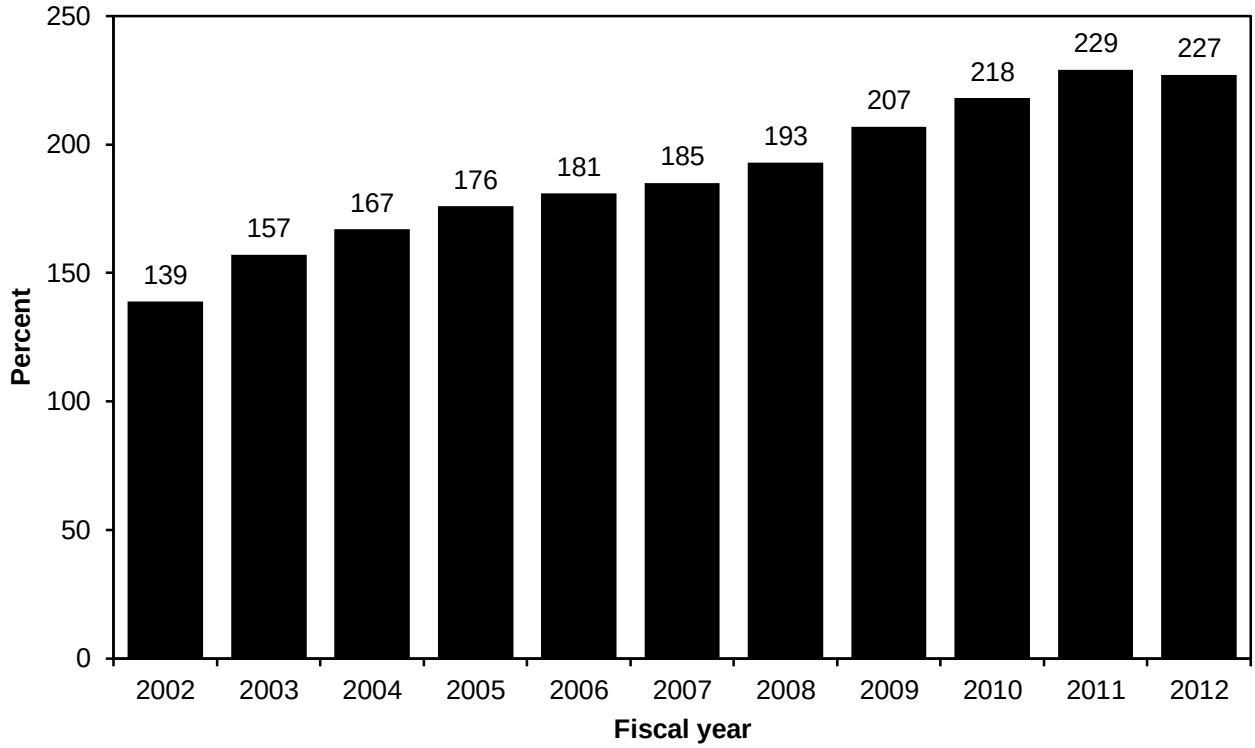
- Changes in Medicare costs per discharge suggest that hospitals have responded to the incentives posed by the rise and fall of financial pressure from private payers over four distinct periods between 1987 and 2011.
- During the first period, 1987 to 1992, private payers' payments rose much faster than the cost of treating patients (seen in the chart as a steep increase in the payment-to-cost ratio). This result suggests minimal pressure from private payers. Medicare costs per discharge rose 8.3 percent per year during these years, more than 3 percentage points a year above the increase in Medicare's market basket index.

(Chart continued next page)

Chart 6-26. Change in Medicare hospital inpatient costs per discharge and private payer payment-to-cost ratio, 1987–2011 (continued)

- As health maintenance organizations and other private insurers exerted more pressure during the second period, 1993 to 1999, the private payer payment-to-cost ratio dropped substantially. The rate of cost growth plummeted to an average of only 0.8 percent per year, which was more than 2 percentage points below the average increase in the market basket.
- As pressure from private payers waned after 1999, the private payer payment-to-cost ratio rose sharply, and hospital cost growth exceeded growth in the market basket by 2 percentage points a year. Between 2005 and 2008, the growth in the private payer payment-to-cost ratio (profit margins) slowed, and in 2008, cost growth more closely matched the market basket.
- Cost growth has slowed since 2008. This decline is partly due to the general slowing of the economy, which has reduced input price inflation. In addition, uncertainty about economic growth in future years and enactment of laws restraining Medicare and Medicaid prices may be inducing hospitals to restrain their cost growth to the level of input price inflation. The combination of lower annual cost growth and continued increases in private insurers' prices has resulted in increases in the profit margins on privately insured patients.

Chart 6-27. Markup of hospital charges above costs for Medicare services, 2002–2012



Note: Analysis includes all community hospitals (including critical access hospitals and hospitals in Maryland). Markups are calculated as the amount of charges over the amount of costs, minus the amount that charges equal costs (charges/costs – 1).

Source: American Hospital Association Annual Survey of Hospitals, 2002–2012.

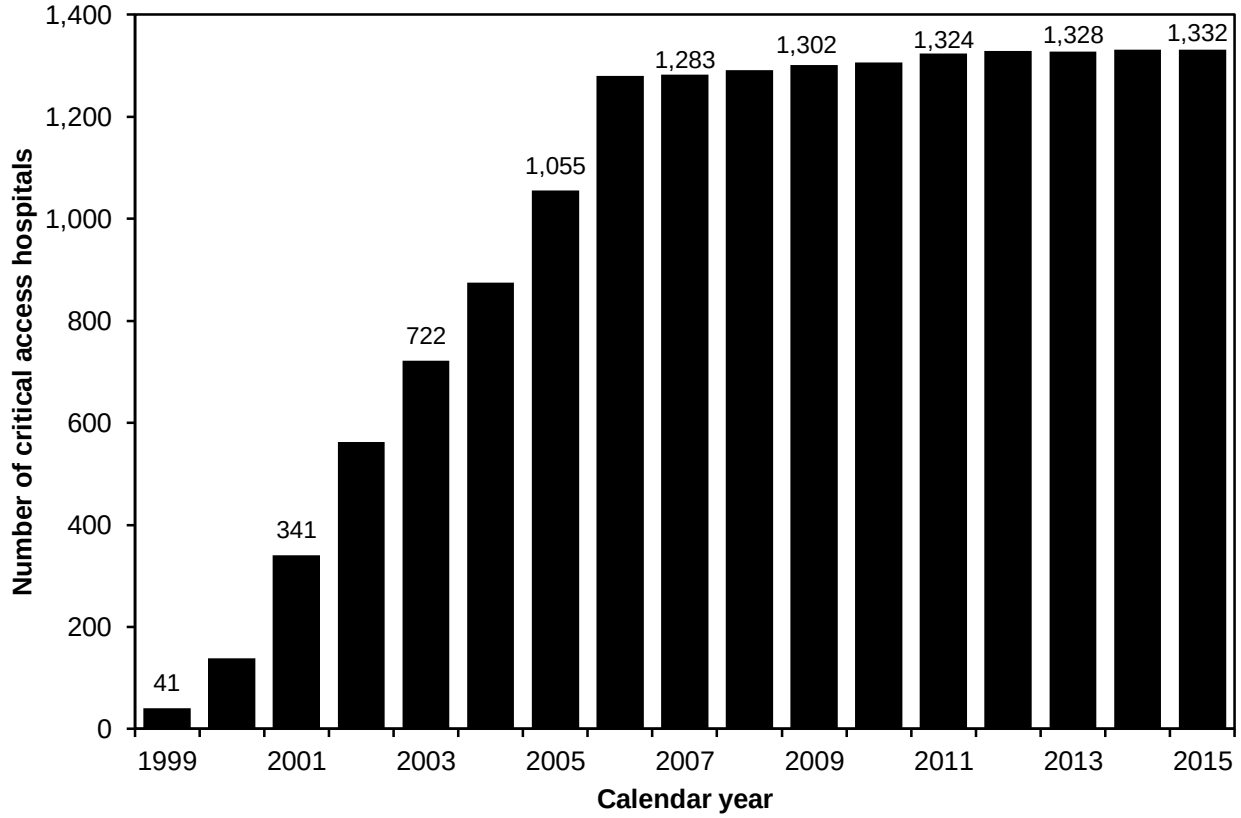
- The average markup of hospitals' charges above costs rose from about 139 percent in 2002 to 227 percent in 2012. Hospital charges ($604 billion) are now more than three times costs ($185 billion).

- Rapid growth in charges may have little impact on hospital financial performance because few patients pay full charges. However, charge growth may significantly affect uninsured patients, who may pay full charges. More rapid growth in charges (relative to growth in costs) may reflect hospitals' attempts to maximize revenue from private payers (who often structure their payments as a discount off charges). The unusually large increases in charges in 2003 and 2004 may have resulted from some hospitals manipulating Medicare outlier payments. Toward the end of fiscal year 2003, Medicare revised its outlier policy in an attempt to curb hospitals' opportunity to increase their outlier payments through excessive increases in charges.

- The markup of charges over costs is generally higher for urban hospitals (237 percent in 2012) than for rural hospitals (164 percent in 2012).

- Among urban hospitals in 2012, the markup of charges over costs was higher for for-profit hospitals (462 percent) than for nonprofit hospitals (234 percent). Rural for-profit hospitals have a higher markup of charges over costs (374 percent) than nonprofit hospitals (175 percent).

Chart 6-28. Number of critical access hospitals, 1999–2015



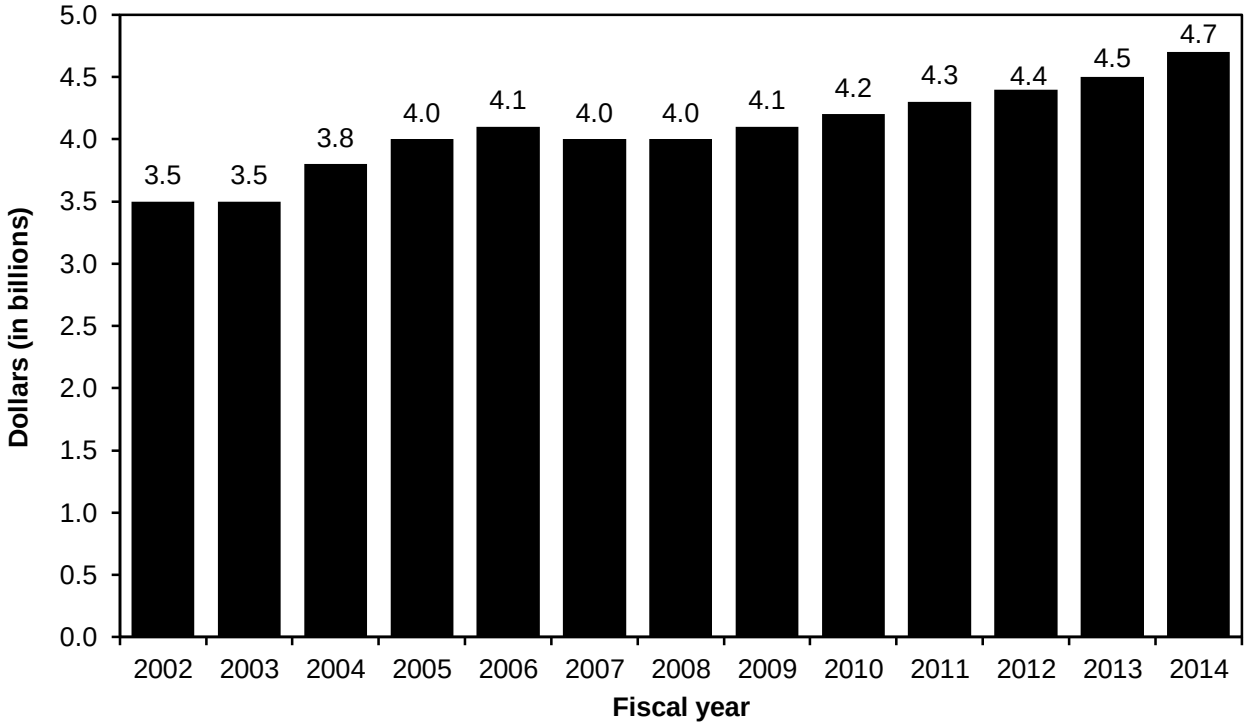
Source: The Medicare Rural Hospital Flexibility Program and CMS.

- The number of critical access hospitals (CAHs) grew rapidly from 1999 to 2006 but has since leveled off at approximately 1,300 facilities.

- The increase in CAHs between 1999 and 2006 was partly due to a series of legislative changes that made conversion to CAH status easier and expanded the services that qualify for cost-based reimbursement. Currently, CAHs are paid their Medicare costs plus 1 percent for inpatient services, outpatient services (including laboratory and therapy services), and post-acute services in swing beds.

- Before 2006, a hospital could convert to CAH status if (1) it was 35 miles by primary road or 15 miles by secondary road from the nearest hospital, or (2) the state waived the distance requirement by declaring the hospital a "necessary provider." Starting in 2006, states could no longer waive the distance requirement. While most existing CAHs fail the distance test, they are grandfathered into the program. Among small rural hospitals that have not converted, most would not meet the distance requirement. Therefore, we expect the number of CAHs to remain fairly constant going forward, absent any additional statutory changes.

Chart 6-29. Medicare payments to inpatient psychiatric facilities, 2002–2014



Source: CMS, Office of the Actuary.

- The inpatient psychiatric facility prospective payment system started January 1, 2005. The new payment system was phased in over a three-year period.
- Medicare program spending for beneficiaries' care in inpatient psychiatric facilities grew an average of 2.4 percent per year between 2002 and 2014.
- Inpatient psychiatric care furnished in scatter beds in acute care hospitals and paid under the acute care inpatient prospective payment system is not included in this chart.

Chart 6-30. Number of inpatient psychiatric facility cases remained steady in 2012

	2006	2007	2008	2009	2010	2011	2012	Average annual change 2006–2009	Average annual change 2009–2012
Cases	474,417	456,045	442,759	431,276	447,897	450,655	450,731	–3.1%	1.5%
Cases per 1,000 FFS beneficiaries	13.1	12.8	12.5	12.1	12.4	12.3	12.1	–2.5	–0.2
Spending per FFS beneficiary	$104.9	$106.2	$109.0	$110.3	$115.5	$117.5	$117.5	1.7	2.1
Payment per case	$7,989	$8,315	$8,742	$9,080	$9,288	$9,515	$9,718	4.4	2.3
Payment per day	$677	$698	$728	$763	$782	$803	$819	4.1	2.4
Length of stay (in days)	13.0	13.0	13.1	13.1	13.0	12.7	12.8	0.3	–0.9

Note: FFS (fee-for-service). Numbers of cases and patients reflect Medicare FFS use of services furnished in inpatient psychiatric facilities (IPFs). Scatter bed cases and spending are excluded, as are cases and spending for beneficiaries enrolled in Medicare Advantage plans.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- The number of IPF cases remained steady between 2011 and 2012. Controlling for the number of FFS beneficiaries, however, the number of cases declined slightly, falling from 12.3 cases per 1,000 FFS beneficiaries to 12.1 cases.

Chart 6-31. Inpatient psychiatric facilities, 2004–2012

Type of IPF	TEFRA 2004	PPS 2005	2006	2007	2008	2009	2010	2011	2012	Average annual change 2004–2012
All	1,657	1,645	1,648	1,653	1,634	1,610	1,591	1,536	1,531	–1.0%
Urban	1,301	1,295	1,285	1,277	1,262	1,243	1,223	1,178	1,177	–1.2
Rural	356	350	363	376	372	367	368	358	352	–0.1
Freestanding	352	366	396	412	419	432	447	426	434	2.7
Hospital-based units	1,305	1,279	1,252	1,241	1,215	1,178	1,144	1,110	1,097	–2.1
Nonprofit	949	917	903	879	865	837	803	757	747	–2.9
For profit	327	347	348	365	358	374	386	404	421	3.2
Government	381	381	397	409	411	399	402	375	363	–0.6

Note: IPF (inpatient psychiatric facility), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). CMS began a three-year phase-in of the IPF PPS on January 1, 2005. Numbers are for facilities that submitted valid Medicare cost reports in the given fiscal year. Numbers may not sum to totals due to missing data.

Source: MedPAC analysis of Medicare cost report files from CMS.

- In 2012, 434 freestanding IPFs and 1,097 hospital-based psychiatric units provided inpatient-level care to Medicare beneficiaries. Since 2004, the number of psychiatric units filing Medicare cost reports has declined, on average, 1 percent per year. At the same time, the number of freestanding IPFs has grown, on average, 2.7 percent per year.

- A growing share of Medicare IPF users receives care in for-profit facilities. Since 2004, the number of nonprofit IPFs has fallen 2.9 percent per year, on average, compared with a 3.2 percent increase in for-profit IPFs.

Chart 6-32. One diagnosis accounted for almost three-quarters of IPF cases in 2012

MS–DRG	Diagnoses	Percentage
885	Psychosis	72.6%
057	Degenerative nervous system disorders without MCC	7.1
884	Organic disturbances and mental retardation	6.3
897	Alcohol/drug abuse or dependency, no rehabilitation, without MCC	4.6
881	Depressive neurosis	3.4
882	Neurosis except depressive	1.2
895	Alcohol/drug abuse or dependency with rehabilitation, without MCC	1.0
880	Acute adjustment reaction and psychosocial dysfunction	0.7
056	Degenerative nervous system disorders with MCC	0.5
886	Behavioral and developmental disorders	0.4
883	Disorders of personality and impulse control	0.4
894	Alcohol/drug use—left AMA	0.3
896	Alcohol/drug abuse or dependency without rehabilitation, with MCC	0.2
876	OR procedure with principal diagnosis of mental illness	0.1
081	Nontraumatic stupor and coma without MCC	0.1
887	Other mental disorders	0.1
080	Nontraumatic stupor and coma with MCC	0.0
	Nonpsychiatric MS–DRGs	0.9
	Total	100.0

Note: IPF (inpatient psychiatric facility), MCC (major comorbidity or complication), MS–DRG (Medicare severity–diagnosis related group), AMA (against medical advice), OR (operating room).

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- Medicare patients in IPFs are generally assigned to 1 of 17 psychiatric MS–DRGs.
- The most frequently occurring IPF diagnosis—accounting for about 73 percent of IPF discharges in 2012—was psychosis. In 2012, the next most common discharge diagnosis, accounting for about 7 percent of IPF cases, was degenerative nervous system disorder.

Chart 6-33. Characteristics of IPF users, 2012

Characteristic	Share of total IPF users	Share of users with more than one IPF stay
Current eligibility status*		
Aged	41.0%	28.3%
Disabled	58.9	71.3
ESRD only	0.1	0.4
Age (years)		
<45	23.8	31.5
45–64	34.6	39.5
65–79	24.5	19.5
80+	17.1	9.5
Race		
White	78.4	75.1
African American	15.8	18.7
Hispanic	2.7	3.1
Other	3.1	3.1
All	100.0	28.0

Note: IPF (inpatient psychiatric facility), ESRD (end-stage renal disease). Numbers may not sum to totals due to rounding.
*Some aged beneficiaries are also disabled.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- About 59 percent of Medicare beneficiaries who had at least one IPF stay in 2012 qualified for Medicare because of a disability. These beneficiaries tend to be younger and poorer than the typical fee-for-service beneficiary.
- About 28 percent of Medicare beneficiaries who used an IPF in 2012 had more than one IPF stay during the year. These beneficiaries were far more likely than all IPF users to be disabled.
- A majority of beneficiaries admitted to IPFs are dually eligible for Medicare and Medicaid. In 2012, 57 percent of Medicare beneficiaries with at least one IPF stay were dually eligible for at least one month of the year (data not shown).

SECTION 7

Ambulatory care

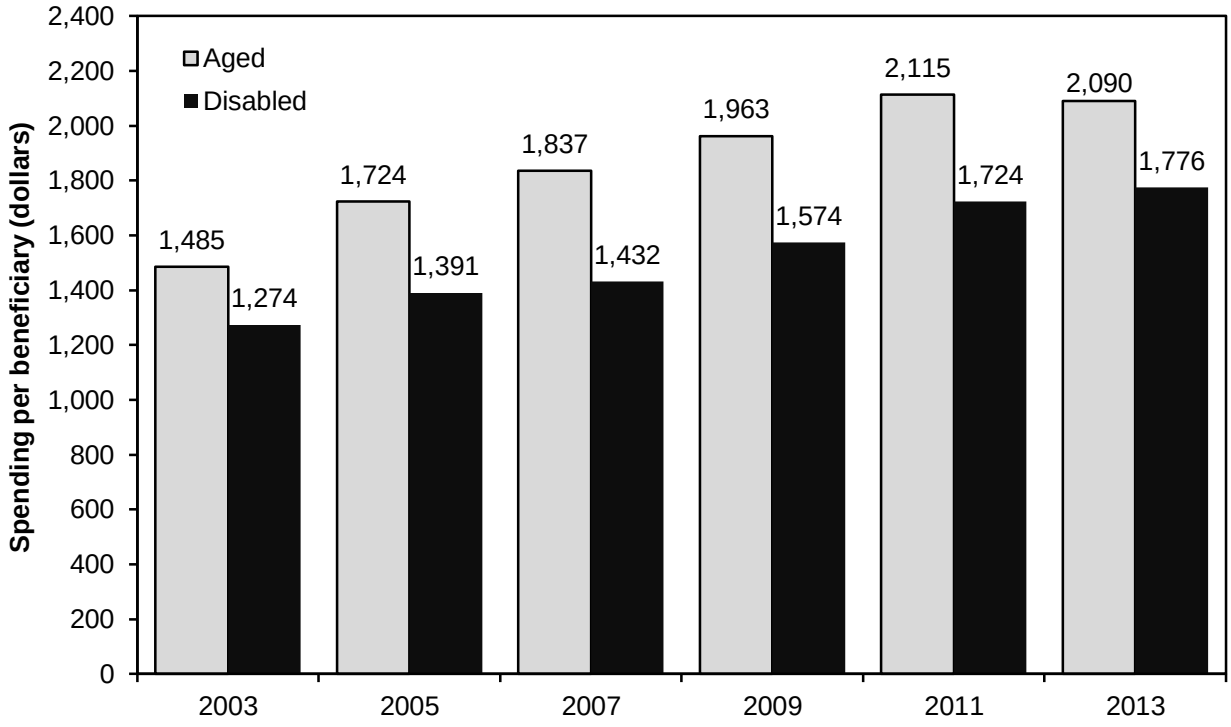
Physicians and other health professionals

Hospital outpatient services

Ambulatory surgical centers

Imaging services

Chart 7-1. Medicare spending per FFS beneficiary on services in the fee schedule for physicians and other health professionals, 2003–2013

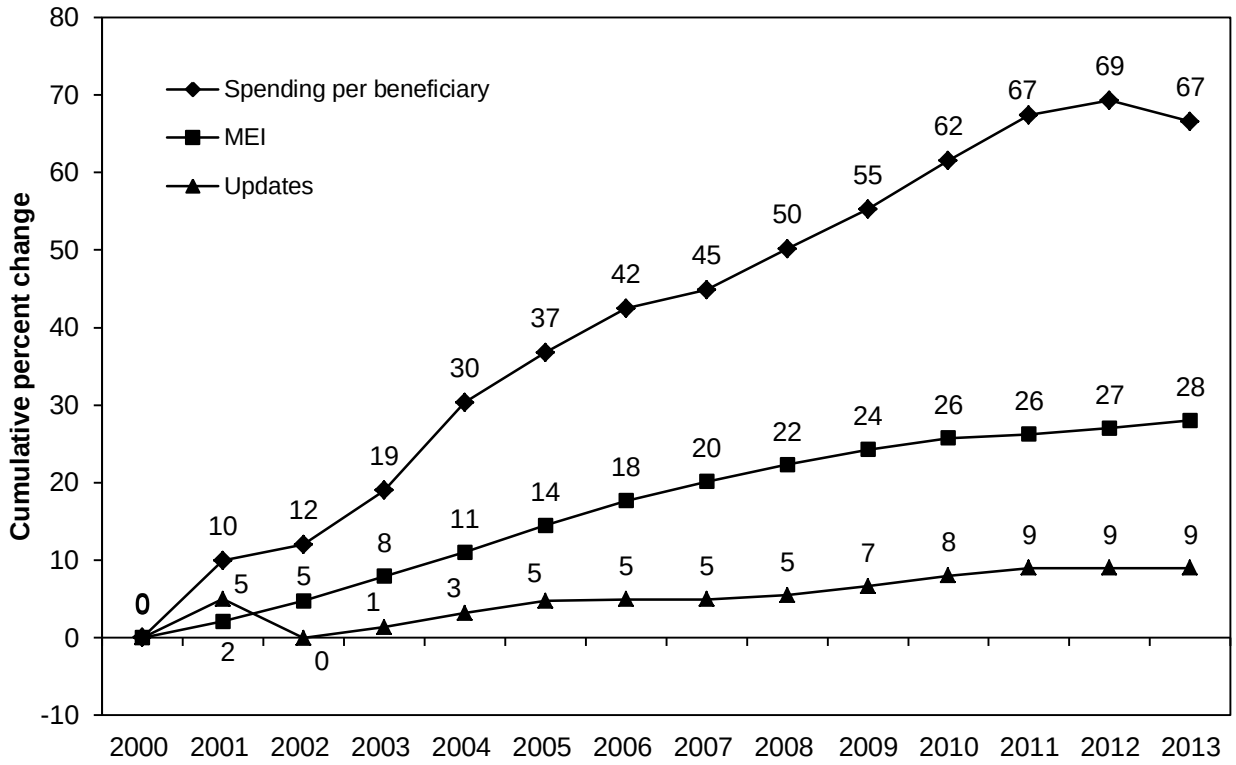


Note: FFS (fee-for-service). Dollar amounts are Medicare spending only and do not include beneficiary coinsurance. The category "disabled" excludes beneficiaries who qualify for Medicare because they have end-stage renal disease. All beneficiaries ages 65 and over are included in the "aged" category.

Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- The fee schedule for physicians and other health professionals includes a broad range of services such as office visits, surgical procedures, and a variety of diagnostic and therapeutic services furnished in all health care settings. "Other health professionals" refers to nurse practitioners, physician assistants, chiropractors, and physical therapists.
- Except for a small decrease in spending for aged beneficiaries in 2013, FFS spending per beneficiary for fee-schedule services has increased annually. From 2003 to 2013, spending grew 40 percent.
- Growth in spending on fee-schedule services is one of several contributing factors in Part B premium increases over this period.
- Per capita spending for disabled beneficiaries (under age 65) is lower than per capita spending for aged beneficiaries. In 2013, for example, per capita spending for disabled beneficiaries was $1,776 compared with $2,090 for aged beneficiaries.

Chart 7-2. Volume growth has raised physician spending more than input prices and payment updates, 2000–2013



Note: MEI (Medicare Economic Index).

Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- From 2000 to 2013, Medicare spending per beneficiary for physician services increased by 67 percent.
- Spending per beneficiary grew much more rapidly over the period than both the payment rate updates and the MEI. Physician fee-schedule payment updates totaled 9 percent, and the MEI increased 28 percent.
- Growth in the volume of services contributed much more to the rapid increase in Medicare spending than payment rate updates. Both factors—updates and volume growth—combined to increase physician revenues.

Chart 7-3. Medicare beneficiaries reported better ability to get timely appointments with physicians compared with privately insured individuals, 2011–2014

	Medicare (ages 65 or older)				Private insurance (ages 50–64)			
Survey question	2011	2012	2013	2014	2011	2012	2013	2014
Unwanted delay in getting an appointment: Among those who needed an appointment, "How often did you have to wait longer than you wanted to get a doctor's appointment?"								
For routine care								
Never	74%	77%[b]	73%	72%[a]	71%	72%	69%	69%[a]
Sometimes	18	17[b]	20	20[a]	21	21[b]	23	23[a]
Usually	3	3	3	3	4	3	4	4
Always	2[b]	2[b]	3	3	3	3	3	3
For illness or injury								
Never	82	84	82	83[a]	79	80	77	79[a]
Sometimes	14	12	14	12[a]	17	16	17	16[a]
Usually	2	2	2	2	2	2	3[a]	2
Always	1	1	1	1[a]	1[b]	2[a]	2	2[a]

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample sizes for each group (Medicare and privately insured) were 4,000 in years 2011 to 2014. Sample sizes for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured samples in the given year.
[b] Statistically significant difference (at a 95 percent confidence level) from 2013 within the same insurance coverage category.

Source: MedPAC-sponsored annual telephone surveys conducted 2011–2014.

- Most Medicare beneficiaries have one or more doctor appointments in a given year. Their ability to schedule timely appointments is one indicator of access that we examine.
- Medicare beneficiaries report better access to physicians for appointments than privately insured individuals ages 50 to 64. For example, in 2014, 72 percent of Medicare beneficiaries and 69 percent of privately insured individuals reported "never" having to wait longer than they wanted to get an appointment for routine care.
- Medicare beneficiaries also report more timely appointments for injury and illness than their privately insured counterparts.
- Appointment scheduling for illness and injury is better than for routine care appointments for both Medicare beneficiaries and privately insured individuals.

Chart 7-4. Medicare and privately insured patients who were looking for a new physician reported more difficulty finding one in primary care, 2011–2014

	Medicare (ages 65 or older)				Private insurance (ages 50–64)			
Survey question	2011	2012	2013	2014	2011	2012	2013	2014
Looking for a new physician: "In the past 12 months, have you tried to get a new …?" (Percent answering "Yes")								
Primary care physician	6%[b]	7%[b]	7%	8%	7%	7%	8%	8%
Specialist	14[b]	13[b]	14[b]	17	16	18	16	17
Getting a new physician: Among those who tried to get an appointment with a new physician, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it …"								
Primary care physician								
No problem	65	72	70	67	68	75	67	63
Small problem	12	14	11	16	16	9	15	16
Big problem	23[b]	14	17	15	14[a]	15	18	19
Specialist								
No problem	84	87	86	85	86	86	87	85
Small problem	8	6	8	7	8	7[b]	6	9
Big problem	7	7	5	7	6	7	7	6

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample sizes for each group (Medicare and privately insured) were 4,000 in 2011 to 2014. Sample sizes for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured samples in the given year.
[b] Statistically significant difference (at a 95 percent confidence level) from 2014 within the same insurance coverage category.

Source: MedPAC-sponsored annual telephone surveys, conducted 2011–2014.

- In 2014, only 8 percent of Medicare beneficiaries and privately insured individuals reported looking for a new primary care physician. This finding suggests that most people were either satisfied with their current physician or did not need to look for one.
- Of the 8 percent of Medicare beneficiaries who looked for a new primary care physician in 2014, 31 percent reported problems finding one: 15 percent reported their problem as "big," and 16 percent reported their problem as "small." Although this number indicates that only about 2 percent of the total Medicare population reported problems finding a primary care physician, the Commission is concerned about the continuing trend of greater problems accessing primary care.
- Of the 8 percent of privately insured individuals who looked for a new primary care physician in 2014, 35 percent reported problems finding one: 19 percent reported their problem as "big," and 16 percent reported their problem as "small."
- In 2014, Medicare beneficiaries and privately insured individuals were more likely to report problems accessing a new primary care physician than a new specialist.

Chart 7-5. Access to physician care was better for Medicare beneficiaries than privately insured individuals, but minorities in both groups reported unwanted delays slightly more frequently, 2014

	Medicare (ages 65 or older)			Private insurance (ages 50–64)		
Survey question	All	White	Minority	All	White	Minority
Unwanted delay in getting an appointment: Among those who needed an appointment, "How often did you have to wait longer than you wanted to get a doctor's appointment?"						
For routine care						
Never	72%[a]	73%[a]	72%[a]	69%[a]	70%[a]	66%[a]
Sometimes	20[a]	20[a]	19[a]	23[a]	23[a]	24[a]
Usually	3	3	3	4	4	4
Always	3	2	3	3	2[b]	5[b]
For illness or injury						
Never	83[a]	84[ab]	80[a]	79[a]	80[ab]	73[ab]
Sometimes	12[a]	12[a]	14[a]	16[a]	16[ab]	19[ab]
Usually	2	2	2	2	2	3
Always	1[a]	1	2[a]	2[a]	2[b]	4[ab]

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample size for each group (Medicare and privately insured) was 4,000 in 2014. Sample size for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured populations in the given race category.
[b] Statistically significant difference (at a 95 percent confidence level) by race within the same insurance category.

Source: MedPAC-sponsored telephone surveys conducted in 2014.

- In 2014, Medicare beneficiaries reported better access to physicians for appointments than privately insured individuals ages 50 to 64.
- Access varied by race, with minorities more likely than Whites to report access problems in both insurance categories. For example, in 2014, 84 percent of White Medicare beneficiaries reported "never" having to wait longer than they wanted to get an appointment for an illness or injury compared with 80 percent of minority beneficiaries.
- Although minorities experienced slightly more access problems, minorities with Medicare were less likely to experience problems than minorities with private insurance.

Chart 7-6. Differences in obtaining access to a new physician did not vary significantly between White and minority Medicare patients, 2014

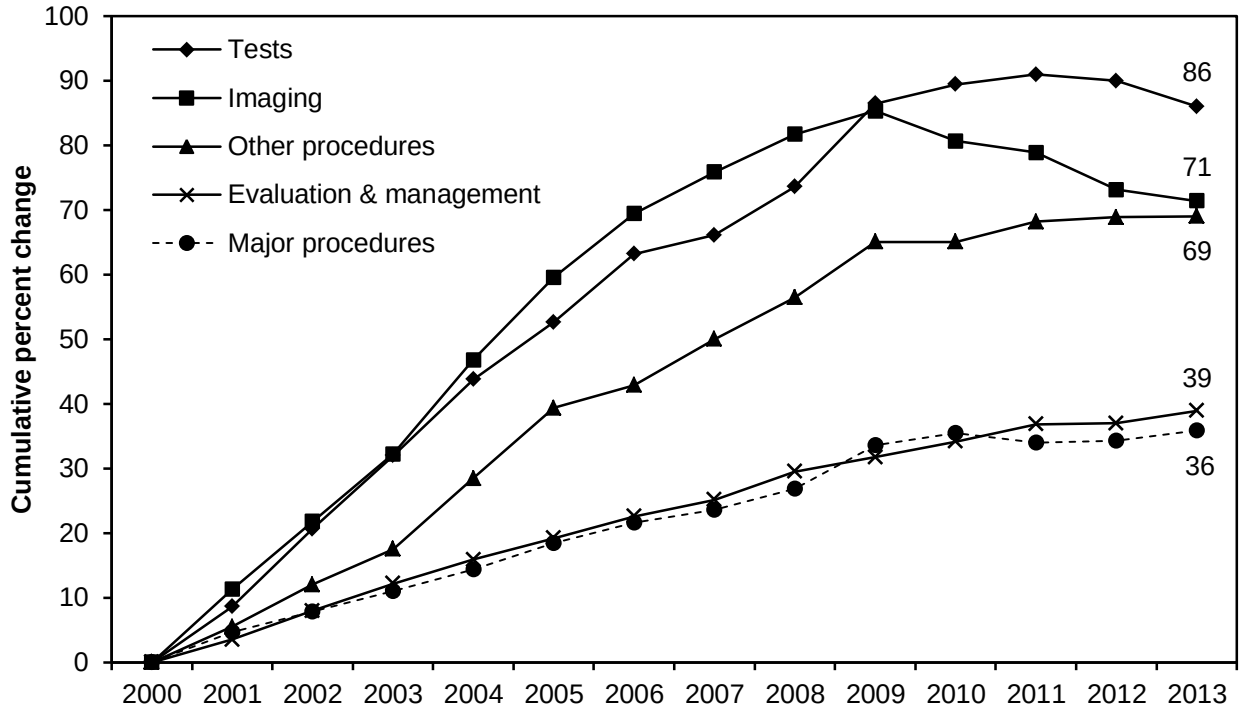
	Medicare (ages 65 or older)			Private insurance (ages 50–64)		
Survey question	All	White	Minority	All	White	Minority
Looking for a new physician: "In the past 12 months, have you tried to get a new …?"						
Primary care physician	8%	8%	8%	8%	7%	9%
Specialist	17	18[b]	14[b]	17	18[b]	14[b]
Getting a new physician: Among those who tried to get an appointment with a new physician, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it …"						
Primary care physician						
No problem	67	67	69	63	60	72
Small problem	16	16	16	16	17	14
Big problem	15	15	13	19	22	13
Specialist						
No problem	85	85	83	85	86	84
Small problem	7	7	5	9	8	10
Big problem	7	7	8	6	6	7

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample size for each group (Medicare and privately insured) was 4,000 in 2014. Sample size for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured populations in the given race category.
[b] Statistically significant difference (at a 95 percent confidence level) by race within the same insurance category.

Source: MedPAC-sponsored telephone surveys conducted in 2014.

- Among the small percentage of Medicare beneficiaries and privately insured individuals looking for a new specialist, minorities were slightly more likely than Whites to report problems finding one, although differences in 2014 were small and not statistically significant.

Chart 7-7. Growth in volume per beneficiary of physician and other health professional services, 2000–2013

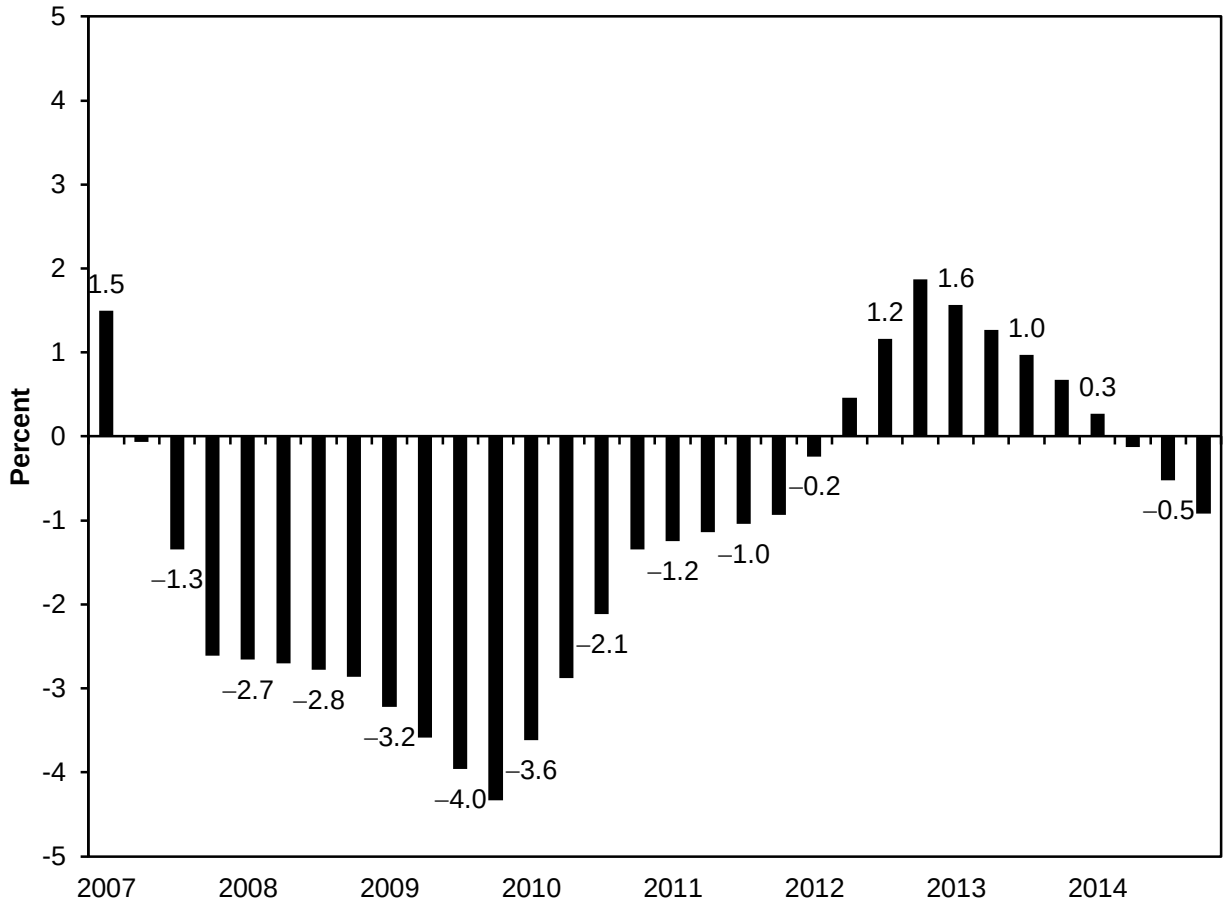


Note: "Volume" refers to the units of service multiplied by relative value units from the fee schedule for services furnished by physicians and other qualified health professionals. Volume for all years is measured on a common scale, with relative value units for 2013. Volume growth for evaluation and management (E&M) from 2009 to 2010 is not directly observable because of a change in payment policy for consultations. To compute cumulative volume growth for E&M through 2013, we used a growth rate for 2009 to 2010 of 1.9 percent, which is the average of the 2008 to 2009 growth rate of 1.7 percent and the 2010 to 2011 growth rate of 2.0 percent.

Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

- From 2000 to 2013, the volume of some services furnished by physicians and other qualified health professionals grew much more than others.
- The volume of tests grew by 86 percent, the volume of imaging grew by 71 percent, and the volume of "other procedures" (procedures other than major procedures) grew by 69 percent. The comparable growth rates for E&M services and major procedures were only 39 percent and 36 percent, respectively.
- Volume growth increases Medicare spending, limiting funds available for other priorities in the federal budget and requiring taxpayers and beneficiaries to contribute more to the Medicare program. Overall volume increases translate directly to growth in both Part B spending and premiums. Rapid volume growth may be a sign that some services in the physician fee schedule are mispriced.

Chart 7-8. Changes in physicians' professional liability insurance premiums, 2007–2014



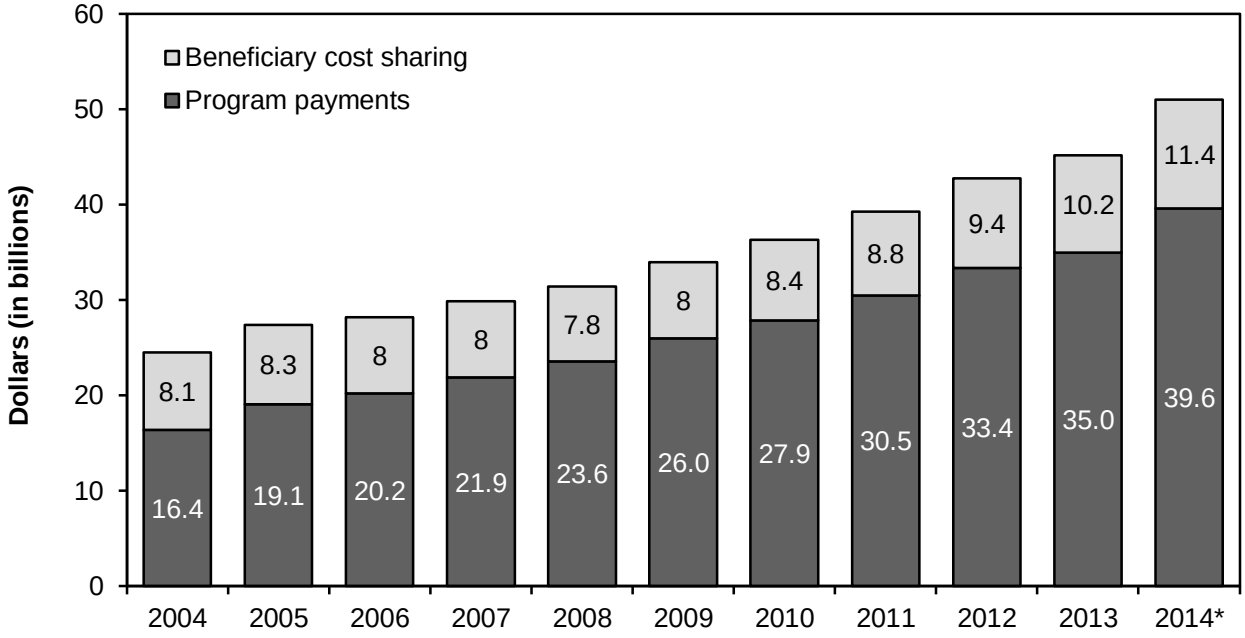
Note: Bars represent a four-quarter moving average percent change.

Source: CMS, Office of the Actuary. Data are from CMS's Professional Liability Physician Premium Survey.

- Professional liability insurance (PLI) accounts for 4.3 percent of total payments under the physician fee schedule. PLI premiums generally follow a cyclical pattern, alternating between periods of low premiums—characterized by high investment returns for insurers and vigorous competition—and high premiums—characterized by declining investment returns and market exit.

- The change in PLI premiums over the last 13 years reflects a cyclical pattern. Premiums increased from 2002 through 2006 (data not shown) and then declined from the second quarter of 2007 through the first quarter of 2012. Premiums grew slowly from the second quarter of 2012 through the first quarter of 2014 and began falling during the second quarter of 2014.

Chart 7-9. Spending on hospital outpatient services covered under the outpatient PPS, 2004–2014



Note: PPS (prospective payment system). Spending amounts are for services covered by the Medicare outpatient PPS. They do not include services paid on separate fee schedules (e.g., ambulance services and durable medical equipment) or those paid on a cost basis (e.g., corneal tissue acquisition and flu vaccines) or payments for clinical laboratory services. *Estimate.

Source: CMS, Office of the Actuary.

- Overall spending by Medicare and beneficiaries on hospital outpatient services covered under the outpatient PPS from calendar year 2004 to 2014 increased by 108 percent, reaching $51 billion. The Office of the Actuary projects continued growth in total spending, averaging 9.4 percent per year from 2014 to 2016.

- In 2001, the first full year of the outpatient PPS, spending under the PPS was $20.1 billion, including $12.1 billion by the program and $8.0 billion in beneficiary cost sharing. Spending under the outpatient PPS is expected to rise to $51 billion in 2014 ($39.6 billion in program spending, $11.4 billion in beneficiary copayments). The outpatient PPS accounted for about 6 percent of total Medicare spending by the program in 2014.

- Beneficiary cost sharing under the outpatient PPS includes the Part B deductible and coinsurance for each service. Under the outpatient PPS, beneficiary cost sharing is generally higher than for other sectors, about 22 percent in 2013. Chart 7-13 provides more detail on coinsurance.

Chart 7-10. Most hospitals provide outpatient services

Year	Hospitals	Percent offering		
		Outpatient services	Outpatient surgery	Emergency services
2004	3,882	94%	86%	N/A
2006	3,651	94	86	N/A
2008	3,607	94	87	N/A
2010	3,518	95	90	N/A
2012	3,483	95	91	93%
2013	3,456	96	92	93
2014	3,429	96	92	93

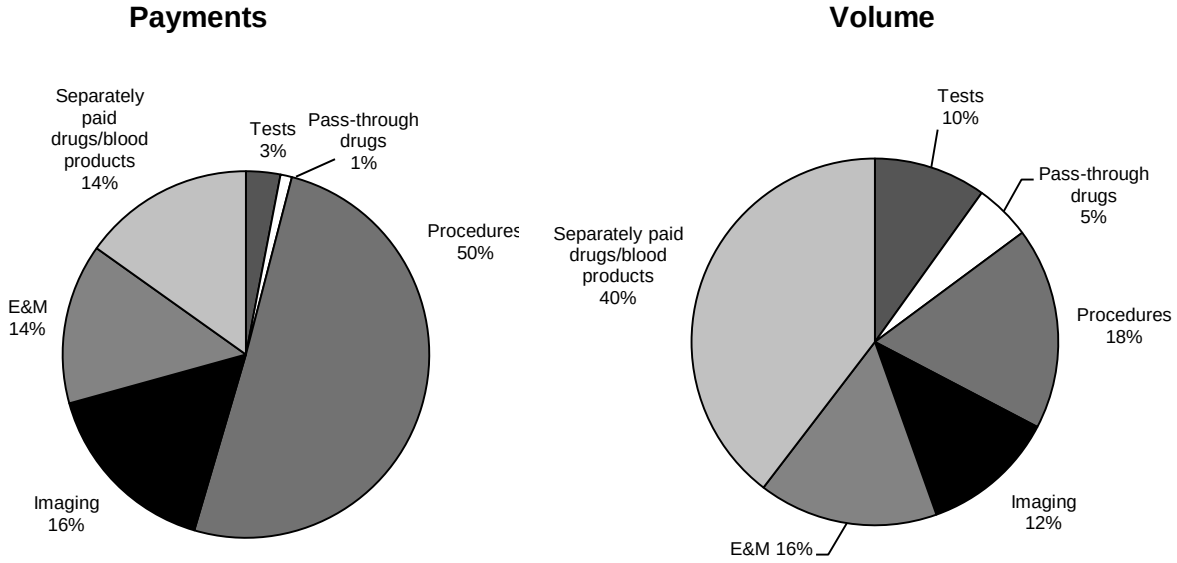
Note: N/A (not applicable). We list emergency services from 2004 through 2010 as "N/A" because the data source we used in this chart changed the variable for identifying hospitals' provision of emergency services. We believe this change in variable definition makes it appear that the percentage of hospitals providing emergency services increased sharply from 2010 to 2012, but we question whether such a large increase actually occurred. This chart includes services provided or arranged by short-term hospitals and excludes long-term, Christian Science, psychiatric, rehabilitation, children's, critical access, and alcohol/drug hospitals.

Source: Medicare Provider of Services files from CMS.

- The number of hospitals that furnish services under Medicare's outpatient prospective payment system (PPS) sharply declined from 2002 through 2006, largely because of growth in the number of hospitals converting to critical access hospital status, which allows payment on a cost basis. Since 2006, the decline in the number of outpatient PPS hospitals has slowed.

- The percent of hospitals providing outpatient services remained stable, and the percent offering outpatient surgery steadily increased from 2004 through 2014. The percent offering emergency services has remained stable over the period we are able to measure accurately (in 2011, CMS changed the variable in the Provider of Services file we use to calculate the share of hospitals offering emergency services, so the numbers for 2012 through 2014 are not precisely comparable with prior years).

Chart 7-11. Payments and volume of services under the Medicare hospital outpatient PPS, by type of service, 2013



Note: PPS (prospective payment system), E&M (evaluation and management). Payments include both program spending and beneficiary cost sharing but do not include hold-harmless payments. Services are grouped into evaluation and management, procedures, imaging, and tests according to the Berenson–Eggers Type of Service classification developed by CMS. Pass-through drugs and separately paid drugs and blood products are classified by their payment status indicator. Percentages may not sum to 100 percent due to rounding.

Source: MedPAC analysis of standard analytic file of outpatient claims for 2013.

- Hospitals provide many types of services in their outpatient departments, including emergency and clinic visits, imaging and other diagnostic services, laboratory tests, and ambulatory surgery.
- The payments for services are distributed differently than volume. For example, in 2013, procedures accounted for 50 percent of payments but only 18 percent of volume.
- Procedures (e.g., endoscopies, surgeries, and skin and musculoskeletal procedures) accounted for the greatest share of payments for services (50 percent) in 2013, followed by imaging services (16 percent), separately paid drugs and blood products (14 percent), and evaluation and management services (14 percent).

Chart 7-12. Hospital outpatient services with the highest Medicare expenditures, 2013

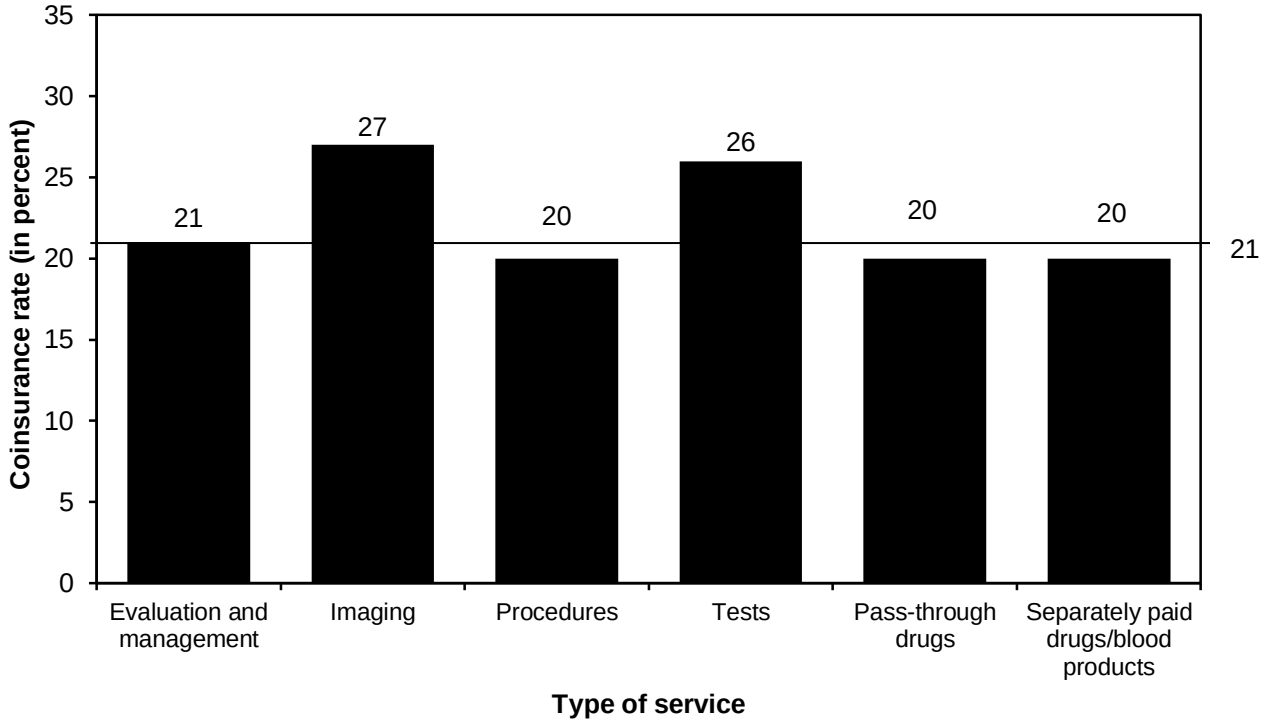
APC title	Share of payments	Volume (thousands)	Payment rate
Total	43%		
All emergency visits	6	12,634	$202
All clinic visits	5	26,329	77
Diagnostic cardiac catheterization	2	476	2,650
Level II extended assessment & management composite	2	2,297	798
Cataract procedures with IOL insert	2	512	1,730
Level II implantation of cardioverter-defibrillators[a]	2	26	30,680
Level I implantation of cardioverter-defibrillators[b]	2	34	22,512
Transcatheter placement of intracoronary drug-eluting stents	2	103	7,763
Level I plain film except teeth	2	15,076	46
Lower gastrointestinal endoscopy	2	1,112	691
Level II endovascular revascularization of the lower extremity	1	84	8,657
Level II echocardiogram without contrast	1	1,677	390
Level III radiation therapy[c]	1	1,298	484
Level II drug administration	1	15,345	39
Level II cardiac imaging	1	847	680
Coronary angioplasty, valvuloplasty, and level I endovascular revascularization of the lower extremity	1	164	4,023
Combined abdomen and pelvis CT with contrast	1	1,110	483
Level II laparoscopy	1	150	3,487
Computed tomography without contrast	1	2,790	174
Level III nerve injections	1	865	566
Level III cystourethroscopy and other genitourinary procedures	1	284	1,909
CT and CTA with contrast composite	1	678	682
Insertion/replacement/conversion of permanent dual chamber pacemaker or pacing electrode	1	45	10,187
MRI and magnetic resonance angiography without contrast material	1	1,185	339
Level I upper gastrointestinal procedures	1	808	623
Average APC		416	143

Note: APC (ambulatory payment classification), IOL (intraocular lens), CT (computed tomography), CTA (computed tomography angiography), MRI (magnetic resonance imaging). The payment rate for "all emergency visits" is a weighted average of payment rates from 10 APCs, and the payment rate for "all clinic visits" is a weighted average of payment rates from 5 APCs.
[a]In 2012, this APC was Insertion/replacement/repair of cardioverter-defibrillator leads.
[b]In 2012, this APC was Insertion of cardioverter-defibrillator pulse generator.
[c]In 2012, this APC was intensity-modulated radiation therapy treatment delivery.

Source: MedPAC analysis of 5 percent analytic files of outpatient claims for calendar year 2013.

- Although the outpatient prospective payment system covers thousands of services, expenditures are concentrated in a handful of categories that have high volume, high payment rates, or both.

Chart 7-13. Medicare coinsurance rates, by type of hospital outpatient service, 2013



Note: Services were grouped into categories of evaluation and management, imaging, procedures, and tests according to the Berenson–Eggers Type of Service classification developed by CMS. Pass-through drugs and separately paid drugs and blood products are classified by their payment status indicators.

Source: MedPAC analysis of the standard analytic files of outpatient claims for 2013.

- Before CMS began using the outpatient prospective payment system (PPS), beneficiary coinsurance payments for hospital outpatient services were based on hospital charges, while Medicare payments were based on hospital costs. As hospital charges grew faster than costs, coinsurance represented an increasingly large share of total payments.
- In adopting the outpatient PPS, the Congress froze the dollar amounts for coinsurance. Consequently, beneficiaries' share of total payments has declined over time.
- The coinsurance rate differs for each service. Some services, such as imaging, have relatively high rates of coinsurance—27 percent in 2013. Other services, such as procedures, have coinsurance rates of 20 percent.
- In 2013, the average coinsurance rate was about 21 percent. There is a small discrepancy between the average coinsurance rate of 21 percent and the average cost sharing of 22 percent listed on Chart 7-9 because the cost sharing includes both coinsurance and the Part B deductible.

Chart 7-14. Effects of hold-harmless and SCH transfer payments on hospitals' outpatient revenue, 2011–2013

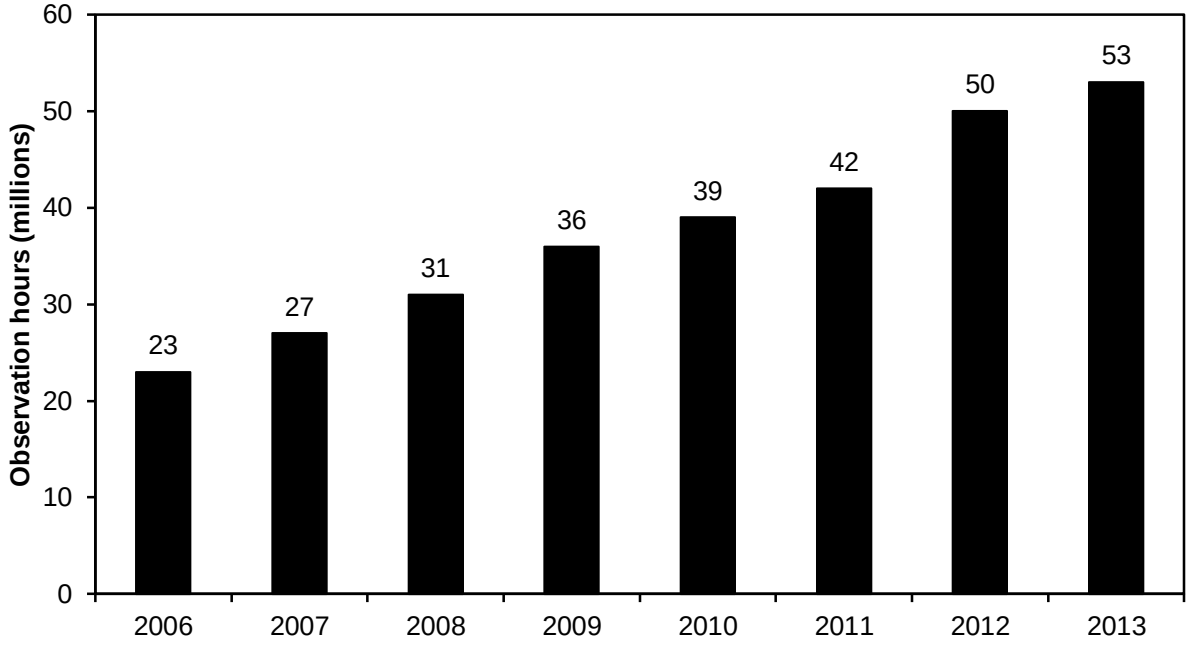
Hospital group	2011 Number of hospitals	2011 Share of payments from hold harmless and SCH transfer	2012 Number of hospitals	2012 Share of payments from hold harmless and SCH transfer	2013 Number of hospitals	2013 Share of payments from hold harmless and SCH transfer
All hospitals	3,087	0.4%	3,029	0.4%	2,877	0.1%
Urban	2,197	–0.3	2,170	–0.3	2,061	–0.4
Rural SCHs	378	8.0	371	8.2	354	6.2
Rural ≤ 100 beds	375	3.1	356	4.2	340	0.7
Other rural	136	–0.1	132	–0.1	121	–0.4
Major teaching	259	–0.3	260	–0.4	251	–0.3
Other teaching	730	–0.1	712	–0.1	684	–0.2
Nonteaching	2,097	1.2	2,057	1.2	1,941	0.5

Note: SCH (sole community hospital). The number of hospitals in groups in 2011 and 2013 do not sum to total because we could not classify one hospital in both years.

Source: MedPAC analysis of Medicare Cost Report files from CMS.

- Medicare implemented the hospital outpatient prospective payment system (PPS) in 2000. Previously, Medicare paid for hospital outpatient services on the basis of hospital costs. Recognizing that some hospitals might receive lower payments under the outpatient PPS than under the earlier system, the Congress established transitional corridor payments. The corridors were designed to make up part of the difference between payments that hospitals would have received under the old payment system and those under the new outpatient PPS.
- Transitional corridor payments expired for most hospitals at the end of 2003. However, some rural hospitals continued to receive a special category of transitional corridor payments called "hold harmless" (HH) through 2012. Qualifying hospitals receive the greater of the payments they would have received from the previous system or the actual outpatient PPS payments.
- Hospitals that qualified for HH payments in 2004 and 2005 included rural SCHs and other small rural hospitals (100 or fewer beds). After 2005, small rural hospitals continued to be eligible for HH payments, but SCHs no longer qualified. In 2006, CMS implemented a policy (the "SCH transfer") that increased outpatient payments to rural SCHs by 7.1 percent above the standard rates. This policy is made budget neutral by reducing payments to all other hospitals. Finally, the Congress reestablished HH payments for SCHs that had 100 or fewer beds in 2009 and extended HH payments to all SCHs in 2010 and 2011. HH payments for SCHs that had more than 100 beds expired on March 1, 2012, and expired for SCHs and rural hospitals that had 100 or fewer beds on January 1, 2013.
- HH payments and the SCH transfer represented 0.4 percent of total outpatient PPS payments for all hospitals in 2011. However, the percentage of total outpatient payments from these policies was 8.0 percent for rural SCHs and 3.1 percent for small rural hospitals. Data from 2012 and 2013 indicate transfer and HH payments to rural SCHs were 8.2 percent of their outpatient revenue in 2012 and 6.2 percent in 2013. Hold-harmless payments were 4.2 percent of total outpatient payments to small rural hospitals in 2012, but only 0.7 percent in 2013.

Chart 7-15. Number of observation hours increased, 2006–2013



Source: MedPAC analysis of Limited Data Set claims for the outpatient prospective payment system 2006–2013.

- Hospitals use observation care to determine whether a patient should be hospitalized for inpatient care, transferred to an alternative treatment setting, or sent home.
- Medicare began providing separate payments to hospitals for some observation services on April 1, 2002. Previously, the observation services were packaged into the payments for the emergency department or clinic visits that occurred with observation care.
- The number of observation hours (both packaged and separately paid) has increased substantially, from about 23 million in 2006 to 53 million in 2013. Before 2006, it was difficult to count the total number of observation hours because hospitals were not required to report packaged observation hours on Medicare claims.

Chart 7-16. Number of Medicare-certified ASCs increased by 15 percent, 2007–2014

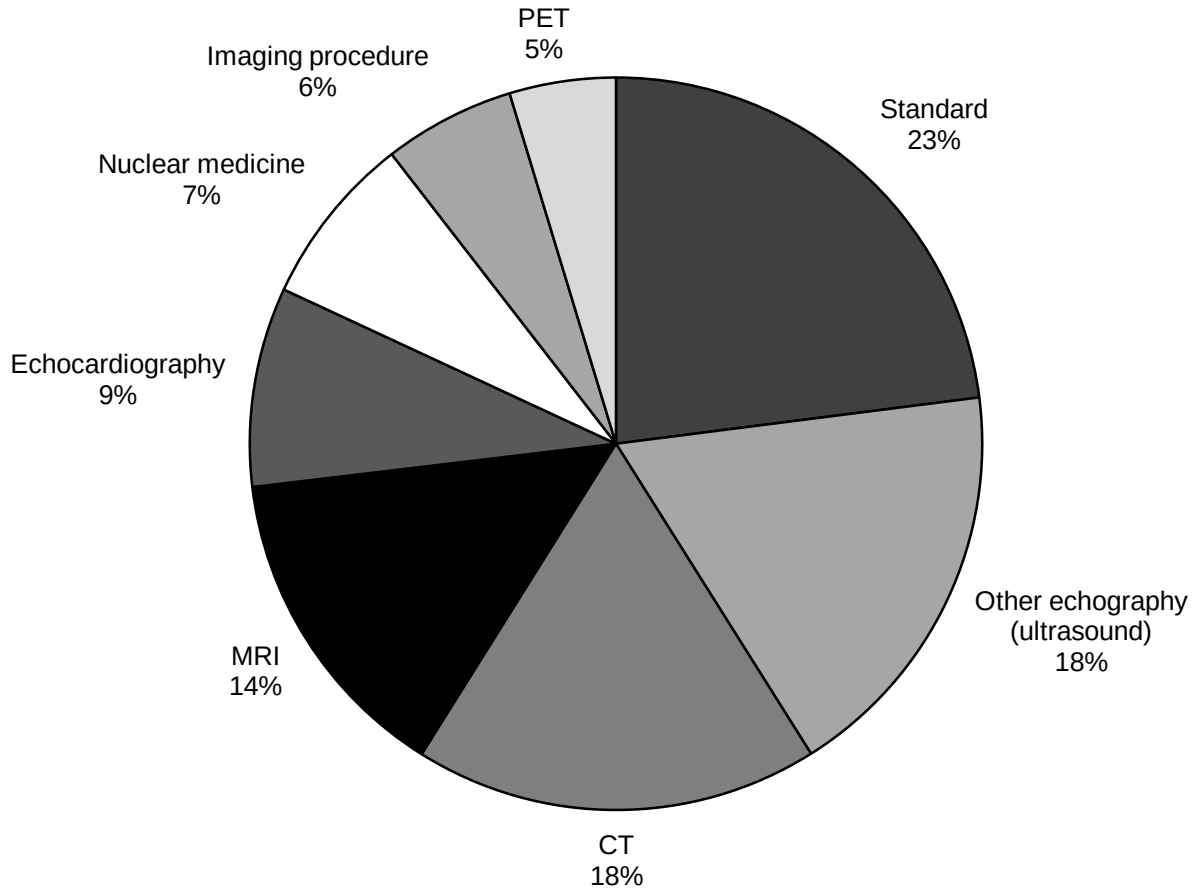
	2007	2008	2009	2010	2011	2012	2013	2014
Medicare payments (billions of dollars)	$2.9	$3.1	$3.2	$3.3	$3.4	$3.6	$3.7	$3.9
Number of centers	4,740	4,941	5,049	5,135	5,217	5,287	5,363	5,347
New centers	343	282	220	195	198	169	164	125
Closed or merged centers	79	81	112	109	116	99	88	51
Net percent growth in number of centers from previous year	5.6%	4.2%	2.2%	1.7%	1.6%	1.3%	1.4%	1.4%
Percent of all centers that are:								
For profit	95	95	95	95	95	95	95	95
Nonprofit	4	4	3	3	3	3	3	3
Government	1	1	1	1	1	1	2	2
Urban	92	92	92	92	92	93	93	93
Rural	8	8	8	8	8	7	7	7

Note: ASC (ambulatory surgical center). Medicare payments include program spending and beneficiary cost sharing for ASC facility services. Payments for 2014 are preliminary and subject to change. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Provider of Services file from CMS 2014. Payment data are from CMS, Office of the Actuary.

- ASCs are distinct entities that furnish ambulatory surgical services not requiring an overnight stay. The most common ASC procedures are cataract removal with lens insertion, upper gastrointestinal endoscopy, colonoscopy, and nerve procedures.
- Total Medicare payments for ASC services increased by 4.2 percent per year, on average, from 2007 through 2014. Payments per fee-for-service beneficiary grew by 3.9 percent per year during this period. Between 2013 and 2014, total payments rose by 4.3 percent and payments per beneficiary grew by 4.0 percent.
- The number of Medicare-certified ASCs grew at an average annual rate of 2 percent from 2007 through 2014. Each year from 2007 through 2014, an average of 212 new facilities entered the market, while an average of 92 closed or merged with other facilities.
- The slower growth in the number of ASCs from 2009 through 2014 may reflect the substantially higher rates that Medicare pays for ambulatory surgical services in hospital outpatient departments than in ASCs, the very slow growth of national health care spending and Medicare spending, and the significant increase in hospital employment of physicians.

Chart 7-17. Medicare spending for imaging services under the fee schedule for physicians and other health professionals, by type of service, 2013



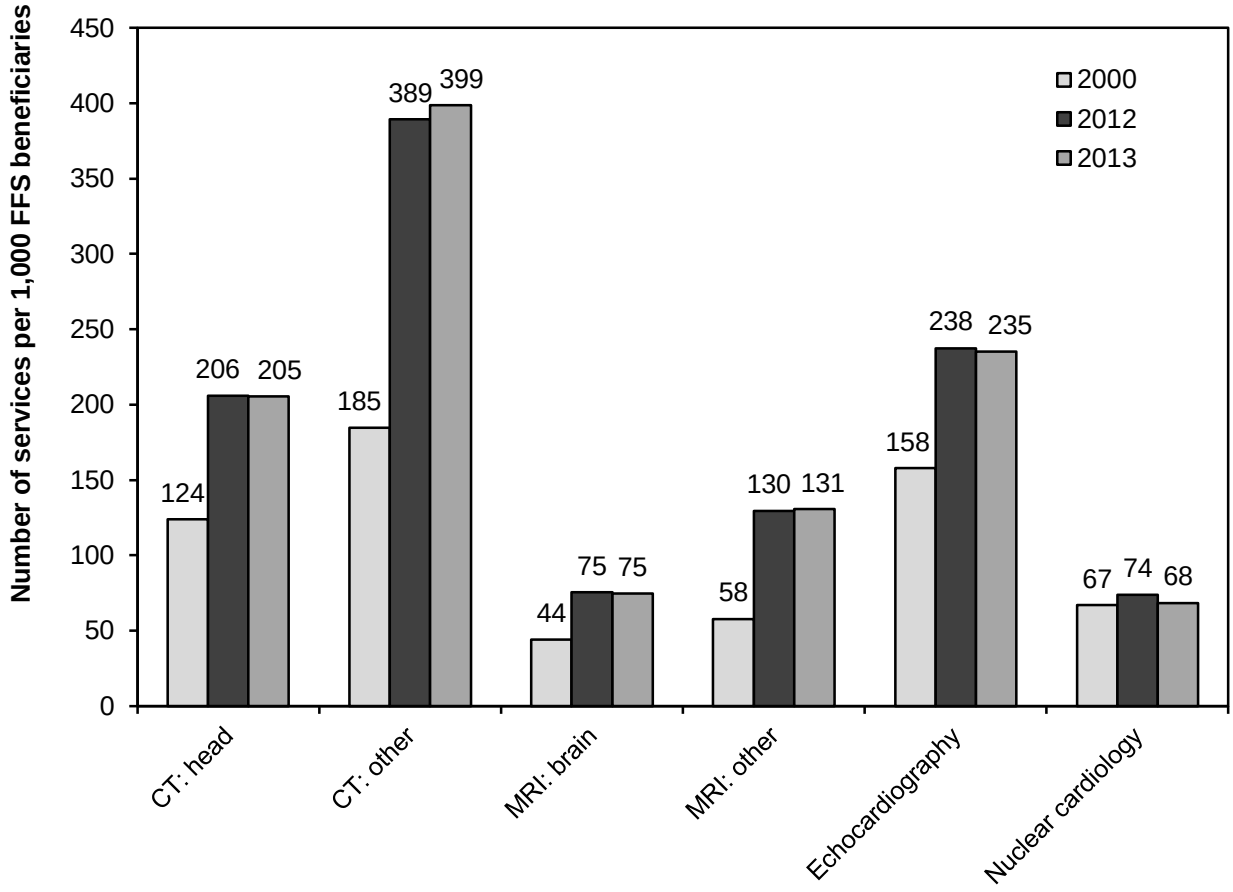
Note: PET (positron emission tomography), MRI (magnetic resonance imaging), CT (computed tomography). Standard imaging includes chest, musculoskeletal, and breast X-rays. Imaging procedures include stereoscopic X-ray guidance for delivery of radiation therapy, fluoroguide for spinal injection, and other interventional radiology procedures. Medicare payments include program spending and beneficiary cost sharing for fee schedule imaging services provided in all settings. Payments include carrier-priced codes but exclude radiopharmaceuticals.

Source: MedPAC analysis of 100 percent physician/supplier procedure summary file from CMS 2013.

- About one-third of Medicare spending for imaging under the fee schedule for physicians and other health professionals in 2013 was for CT and MRI studies. About one-quarter was for various types of ultrasound (echocardiography and other echography).

- Medicare and beneficiaries spent a total of $9.6 billion for imaging services under the fee schedule in 2013. Spending declined from $9.9 billion in 2012 (–3.2 percent). The decline in spending was largely due to a 1 percent drop in the number and complexity of imaging services per beneficiary in 2013, CMS's adoption of more current practice-expense data from a new survey of practitioners, and CMS's update of the interest rate assumption for medical equipment such as imaging machines.

Chart 7-18. Growth in the number of CT, MRI, and cardiac imaging services per 1,000 beneficiaries, 2000–2013



Note: CT (computed tomography), MRI (magnetic resonance imaging), FFS (fee-for-service). Data include physician fee schedule imaging services provided in all settings but exclude technical component–only services. The number of echocardiography and nuclear cardiology services excludes add-on services.

Source: MedPAC analysis of 100 percent physician/supplier procedure summary files from CMS 2000, 2012, and 2013.
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- The number of CT and MRI scans per 1,000 fee-for-service beneficiaries grew rapidly from 2000 to 2012. There was minimal change from 2012 to 2013. For example, the number of CT scans of parts of the body other than the head ("CT: other") more than doubled from 2000 to 2013 (from 185 per 1,000 beneficiaries to 399).

- The number of echocardiography and nuclear cardiology studies also increased from 2000 to 2012, although not as much as CT and MRI scans.

- Echocardiography services per 1,000 beneficiaries grew by 51 percent from 2000 to 2012 and declined by 1 percent in 2013. Nuclear cardiology studies increased by 11 percent from 2000 to 2012 and fell by 7 percent in 2013.

SECTION 8

Post-acute care

Skilled nursing facilities
Home health services
Inpatient rehabilitation facilities
Long-term care hospitals

Chart 8-1. Number of post-acute care providers decreased slightly or remained stable in 2014

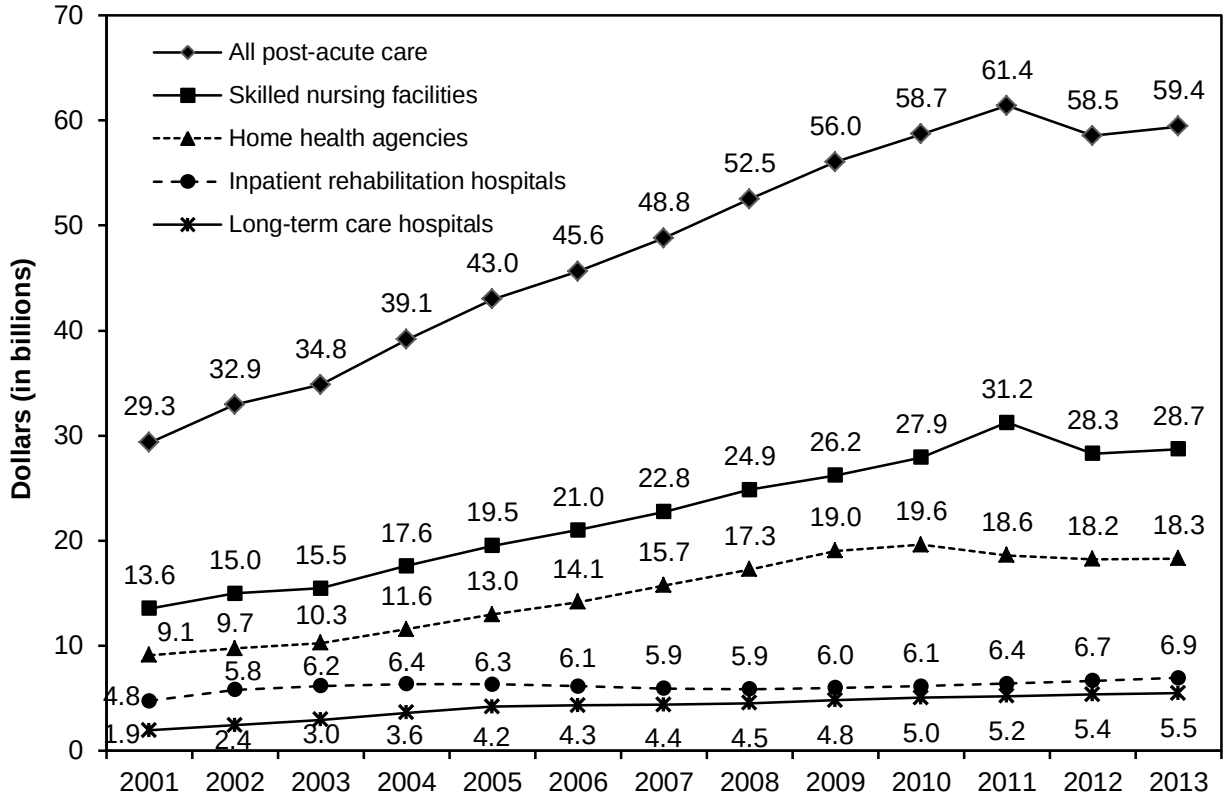
	2005	2007	2009	2011	2013	2014	Average annual percent change 2005–2013	Percent change 2013–2014
Home health agencies	8,314	9,404	10,961	12,026	12,613	12,461	5.3%	–1.2%
Inpatient rehabilitation facilities	1,235	1,202	1,196	1,165	1,161	1,177	–0.6	1.4
Long-term care hospitals	388	396	427	437	432	422	1.4	–2.3
Skilled nursing facilities	15,026	15,047	15,062	15,120	15,163	15,173	0.1	0.1

Note: The skilled nursing facility count does not include swing beds.

Source: MedPAC analysis of data from the Provider of Services files from CMS.

- The number of home health agencies declined slightly in 2014, though this decline comes after several years of substantial growth. The decline in agencies was concentrated in Texas and Florida, two states that have seen considerable growth since the implementation of the prospective payment system in October 2000.
- In spite of a moratorium on new long-term care hospitals (LTCHs) beginning in October 2007, the number of these facilities continued to grow through 2011. The number of LTCHs has since decreased from 437 in 2011 to 422 in 2014.
- The total number of skilled nursing facilities has increased slightly since 2005, and the mix of facilities shifted from hospital-based to freestanding facilities. In 2013, hospital-based facilities made up 5 percent of all facilities, down from 8 percent in 2005.

Chart 8-2. Home health care and skilled nursing facilities have fueled growth in Medicare's post-acute care expenditures



Note: These numbers are program spending only and do not include beneficiary copayments.

Source: CMS Office of the Actuary, 2015.

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- Increases in fee-for-service (FFS) spending on post-acute care have slowed in part because of expanded enrollment in managed care under Medicare Advantage; Medicare Advantage spending is not included in this chart.

- FFS spending on inpatient rehabilitation hospitals declined from 2005 through 2008, reflecting policies intended to ensure that patients who do not need this intensity of services are treated in less-intensive settings. However, spending on inpatient rehabilitation hospitals has increased since 2009.

- FFS spending on skilled nursing facilities increased sharply in 2011, reflecting CMS's adjustment for the implementation of the new case-mix groups (resource utilization groups, version IV) beginning October 2010. Once CMS established that the adjustment it made was too large, it lowered the adjustment, and spending dropped in 2012.

Chart 8-3. Freestanding SNFs and for-profit SNFs account for the majority of facilities, Medicare stays, and Medicare spending

	Facilities		Medicare-covered stays		Medicare payments (billions)	
Type of SNF	2006	2013	2006	2013	2006	2013
Totals	15,178	14,978	2,454,263	2,365,743	$19.5	$26.6
Freestanding	92%	95%	89%	94%	94%	97%
Hospital based	8	5	11	6	6	3
Urban	67	72	79	83	81	85
Rural	33	28	21	17	19	15
For profit	68	70	67	71	73	75
Nonprofit	26	25	29	25	24	21
Government	5	5	4	3	3	3

Note: SNF (skilled nursing facility). Totals may not sum to 100 due to rounding and missing values.

Source: MedPAC analysis of the Provider of Services and Medicare Provider Analysis and Review files, 2006 and 2013.

- The mix of where beneficiaries receive SNF services has shifted toward freestanding, urban, and for-profit facilities.
- In 2013, freestanding facilities accounted for 94 percent of stays and an even larger share of Medicare's payments (97 percent).
- In 2013, urban facilities accounted for 72 percent of facilities, 83 percent of stays, and 85 percent of Medicare payments.
- In 2013, for-profit facilities accounted for 70 percent of facilities, but proportionally higher shares of stays and Medicare payments (71 percent and 75 percent, respectively).

Chart 8-4. SNF service use continued to decline between 2012 and 2013

Volume measure	2006	2008	2010	2012	2013	Percent change 2012–2013
Covered admissions per 1,000 FFS beneficiaries	72	73	72	68	67	–2.2%
Covered days (in thousands)	1,892	1,977	1,938	1,861	1,835	–1.4
Covered days per admission	26.3	27.0	27.1	27.4	27.6	0.7

Note: SNF (skilled nursing facility), FFS (fee-for-service). Data include 50 states and the District of Columbia. Yearly figures presented in the table are rounded, but percent change column was calculated using unrounded data.

Source: Calendar year data from CMS, Office of Information Products and Data Analytics 2013.

- In 2013, 4.5 percent of beneficiaries used SNF services, down slightly from 2011 (not shown).
- Between 2012 and 2013, admissions per 1,000 FFS beneficiaries decreased 2.2 percent, paralleling the decline in inpatient hospital use. An acute hospital stay of three or more days is a prerequisite for Medicare coverage of SNF care.
- Covered days declined at a slower pace (1.4 percent), resulting in a slight increase in covered days per admission (0.7 percent).

Chart 8-5. Freestanding SNF Medicare margins remain high despite reductions in payments

	2002	2004	2006	2008	2010	2012	2013
All	17.5%	13.8%	12.8%	16.7%	19.4%	14.0%	13.1%
Rural	20.3	16.1	13.5	17.9	19.4	13.0	12.1
Urban	16.9	13.3	12.7	16.4	19.4	14.2	13.3
Nonprofit	9.1	3.8	3.2	7.2	10.8	5.7	5.0
For profit	19.4	16.1	15.1	19.0	21.5	16.2	15.3

Note: SNF (skilled nursing facility).

Source: MedPAC analysis of freestanding SNF cost reports 2002–2013.

- Though lower than in recent years, the 2013 Medicare margin for freestanding SNFs exceeded 10 percent for the 14th consecutive year. The 2013 margin is lower than the 2012 margin for two reasons: current law requires market basket increases to be offset by a productivity adjustment and sequestration began lowering payments in April 2013 by 2 percent on an annualized basis.

- In 2013, on average, urban facilities had slightly higher Medicare margins than rural facilities even though rural facilities have higher base rates than urban facilities. For-profit SNFs had higher Medicare margins than nonprofit SNFs.

- In 2013, total margins (the margin across all payers and all lines of business) for freestanding facilities remained positive and increased slightly from 2012 (1.9 percent, up from 1.8 percent in 2012, not shown).

Chart 8-6. Cost and payment differences explain variation in Medicare margins for freestanding SNFs in 2013

Characteristic	Highest margin quartile (*n* = 3,238)	Lowest margin quartile (*n* = 3,238)	Ratio of highest quartile to lowest quartile
Cost measures			
Standardized cost per day	$250	$359	0.7
Standardized cost per discharge	$11,116	$13,591	0.8
Average daily census (patients)	88	68	1.3
Average length of stay (days)	46	37	1.3
Revenue measures			
Medicare payment per day	$474	$424	1.1
Medicare payment per discharge	$22,391	$15,790	1.4
Share of days in intensive therapy	82%	73%	1.1
Share of medically complex days	4	6	0.7
Medicare share of facility revenue	26	16	1.6
Patient characteristics			
Case-mix index	1.39	1.30	1.1
Share of dual-eligible of beneficiaries	40%	27%	1.5
Share of minority beneficiaries	13	4	3.3
Share of very old beneficiaries	30	36	0.8
Medicaid share of days	66	58	1.1
Facility mix			
Percent for profit	90%	60%	N/A
Percent urban	76	68	N/A

Note: SNF (skilled nursing facility), N/A (not applicable). Values shown are medians for the quartile. Highest margin quartile SNFs were in the top 25 percent of the distribution of Medicare margins. Lowest margin quartile SNFs were in the bottom 25 percent of the distribution of Medicare margins. Standardized costs per day are Medicare costs adjusted for differences in area wages and the case mix (using the nursing component's relative weights) of Medicare beneficiaries. "Intensive therapy days" are days classified into ultra-high and very-high rehabilitation case-mix groups. Quartile figures presented in the table are rounded, but the ratio column was calculated using unrounded data.

Source: MedPAC analysis of freestanding SNF cost reports 2013.

- Medicare margins varied widely across freestanding SNFs. One-quarter of SNFs had Medicare margins at or below 3.7 percent, and one-quarter of facilities had Medicare margins at or above 21.7 percent (data not shown).
- High-margin SNFs had lower costs per day (30 percent lower costs than low-margin SNFs), after adjusting for wage and case-mix differences, and higher revenues per day (1.1 times the revenues per day of low-margin SNFs).
- Facilities with the highest Medicare margins had higher case-mix indexes, higher shares of beneficiaries who were dually eligible for Medicare and Medicaid, and higher shares of minority beneficiaries.

Chart 8-7. Financial performance of relatively efficient SNFs reflects a combination of lower cost per day and higher payments per day

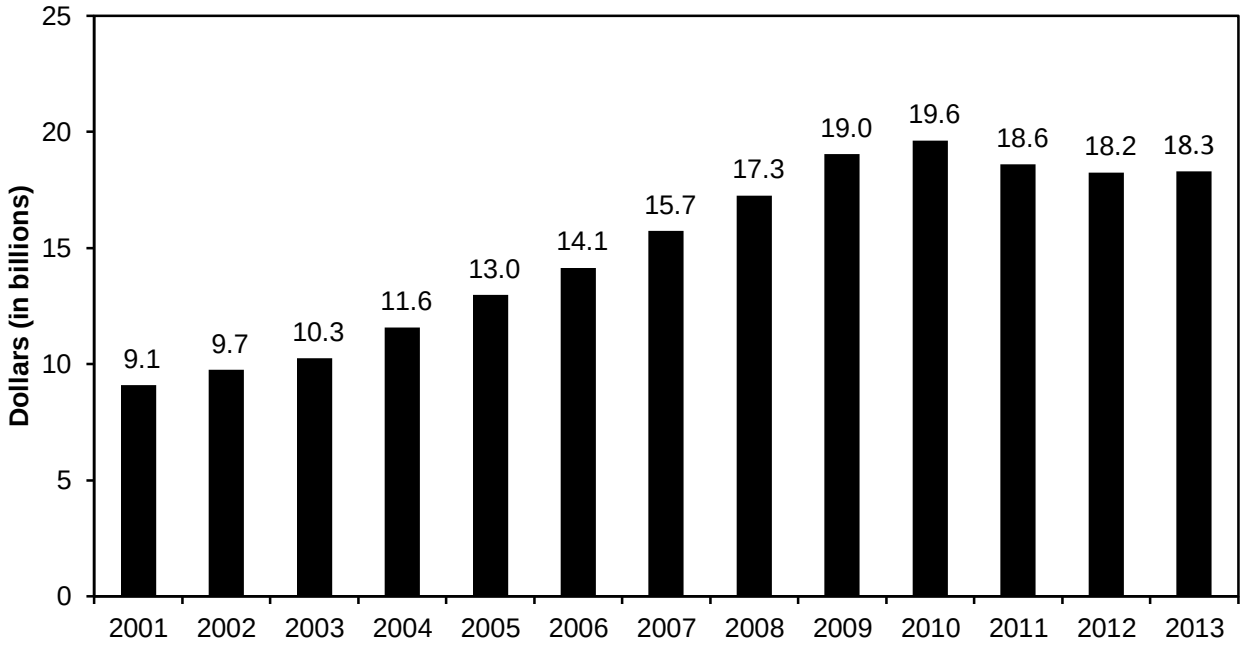
	Relatively efficient SNFs	All SNFs
Performance in 2013		
Community discharge rate	48%	40%
Rehospitalization rate	9%	11%
Standardized cost per day	$272	$293
Medicare revenue per day	$487	$458
Medicare margin	20.6%	14.5%
Total margin	3.5%	2.1%
Facility case-mix index	1.42	1.37
Medicare average length of stay	33 days	37 days
Occupancy rate	88%	87%
Number of beds	120	117
Share of intensive therapy days	82%	80%
Share of medically complex days	5%	5%
Medicaid share of facility days	58%	61%
Share of urban	81%	74%
Share of for profit	83%	75%

Note: SNF (skilled nursing facility). The analysis includes 7,928 freestanding facilities. SNFs were defined as efficient by their cost per day (2010–2012) and two quality measures (community discharge and rehospitalization rates) for the same period. Efficient SNFs were those in the best third of the distribution of one measure and not in the bottom third on any measure in each of three years. Seven percent of SNFs qualified as relatively efficient. Costs per day were standardized for differences in case mix (using the nursing component relative weights) and wages. Quality measures were rates of risk-adjusted community discharge and rehospitalization for patients with potentially avoidable conditions within 100 days of hospital discharge. Quality measures were calculated for all facilities with at least 25 stays. Intensive therapy days include days classified into the ultra-high and very-high case-mix groups. Medically complex days were defined as those assigned to clinically complex or special-care case-mix groups.

Source: MedPAC analysis of quality measures for 2010–2013 and Medicare cost report data for 2010–2013.

- Relatively efficient SNFs were defined as consistently providing relatively low-cost and high-quality care compared with other SNFs.
- Compared with national averages, relatively efficient SNFs furnished considerably higher quality (higher discharge to community rates and lower readmission rates) and had costs per day that were 7 percent lower.

Chart 8-8. Spending on home health care, 2001–2013



Source: CMS Office of the Actuary.

- In October 2000, the prospective payment system (PPS) replaced the previous Medicare payment system. At the same time, eligibility for the benefit broadened slightly.
- Home health care spending has risen rapidly under the PPS. Spending rose by about 10 percent per year between 2001 and 2009; spending peaked in 2010 and has remained relatively flat since 2011.

Chart 8-9. Trends in the provision of home health care

	2002	2012	2013	Percent change 2012–2013	Cumulative percent change 2002–2013
Number of users (in millions)	2.5	3.4	3.5	0.9%	37.8%
Percent of beneficiaries who used home health care	7.2%	9.2%	9.3%	0.5	28.9
Episodes (in millions)	4.1	6.7	6.7	–0.5	63.6
Episodes per home health patient	1.6	2.0	1.9	–1.4	18.7
Visits per home health episode	18.4	16.9	16.5	–2.4	–12.7
Visits per home health patient	31.0	33.1	32.1	3.0	3.5
Average payment per episode	$2,335	$2,677	$2,674	–0.1	14.5

Source: MedPAC analysis of the home health standard analytic file. Yearly figures presented in the table are rounded, but percent change columns were calculated using unrounded data.

- Under the prospective payment system, in effect since October 2000, the number of users and the number of episodes have risen significantly. In 2013, 3.5 million beneficiaries used the home health benefit.
- The number of home health episodes increased rapidly from 2002 to 2013, though growth has slowed in recent years. The number of beneficiaries using home health care has also increased since 2002, but at a lower rate than the growth in episodes.
- The number of visits per episode decreased from 2002 to 2013. However, this decline was offset by an increase in the average number of episodes per patient, which increased from 1.6 in 2002 to 1.9 in 2013. Beneficiaries received fewer visits in an episode but had more 60-day episodes of care. As a result, the average number of visits increased from 31 visits per home health user in 2002 to over 32 visits per home health user in 2013.

Chart 8-10. Home health episodes not preceded by a hospitalization accounted for the majority of services in 2012

	Number of episodes (in millions)		Cumulative growth	Share of episodes	
	2001	2012		2001	2012
Episodes not preceded by a hospitalization or PAC stay:					
First	0.8	1.4	76%	20%	21%
Subsequent	1.3	3.1	141	32	45
Subtotal	2.1	4.5	116	53	66
Episodes preceded by a hospitalization or PAC stay:					
First	1.6	1.8	17	40	27
Subsequent	0.3	0.5	63	8	7
Subtotal	1.9	2.3	23	47	34
Total	3.9	6.8	72	100%	100%

Note: PAC (post-acute care). "First" indicates no home health episode in the 60 days preceding the episode. "Subsequent" indicates the episode started within 60 days of the end of a preceding episode. "Episodes not preceded by a hospitalization or PAC stay" indicates that there was no hospitalization or PAC stay in the 15 days before the start of the episode. "Episodes preceded by a hospitalization or PAC stay" indicates the episode occurred less than 15 days after a stay in a hospital (including a long-term care hospital), skilled nursing facility, or inpatient rehabilitation facility. The number of episodes presented in the table are rounded, but the cumulative growth column was calculated using unrounded data. Numbers may not sum due to rounding.

Source: CMS Datalink file 2012.

- The rise in the average number of episodes per beneficiary coincides with a relative shift away from using home health care as a PAC service.
- During the 2001 through 2012 period, the number of episodes not preceded by a hospitalization or PAC stay increased by 116 percent compared with a 23 percent increase in episodes that were preceded by a hospitalization or PAC stay. During that period, the share of all episodes preceded by a hospitalization or PAC stay rose from about 53 percent to 66 percent.
- Beneficiaries for whom the majority of home health episodes in 2010 were preceded by a hospitalization or other post-acute stay had different characteristics than community-admitted beneficiaries. Community-admitted home health users were more likely to be dually eligible for Medicare and Medicaid, had more home health episodes, and had more episodes with a high share of home health aide services compared with post-acute users of home health (not shown in table). Community-admitted users generally had fewer chronic conditions, tended to be older, and were more likely to have dementia and Alzheimer's disease.

Chart 8-11. Medicare margins for freestanding home health agencies

	2012	2013	Percent of agencies 2013
All	14.5%	12.7%	100%
Geography			
Mostly urban	14.9	13.1	84
Mostly rural	12.8	11.0	16
Type of control			
For profit	15.3	13.7	89
Nonprofit	14.5	10.0	11
Volume quintile			
First	7.1	6.1	20
Second	8.1	7.8	20
Third	10.1	8.9	20
Fourth	13.2	11.2	20
Fifth	16.8	14.8	20

Note: Agencies are characterized as urban or rural based on the residence of the majority of their patients. Agencies with outlier payments that exceeded 10 percent of Medicare revenues are excluded from the reported statistics.

Source: MedPAC analysis of 2012–2013 Medicare Cost Report files from CMS.

- In 2013, freestanding home health agencies (HHAs) (about 85 percent of all HHAs) had an aggregate margin of 12.7 percent. HHAs that served mostly urban patients in 2013 had an aggregate margin of 13.1 percent; HHAs that served mostly rural patients had an aggregate margin of 11.0 percent. The 2013 margin is consistent with the historically high margins the home health industry has experienced under the prospective payment system. The margin from 2001 to 2012 averaged 17.5 percent (data not shown), indicating that most agencies have been paid well in excess of their costs under the prospective payment system.

- For-profit agencies in 2013 had an average margin of 13.7 percent, and nonprofit agencies had an average margin of 10.0 percent.

- Agencies that serve more patients have higher margins. The agencies in the lowest volume quintile in 2013 have an aggregate margin of 6.1 percent, while those in the highest quintile have an aggregate margin of 14.8 percent.

Chart 8-12. Number of IRF FFS patients was stable in 2013

	2004	2011	2012	2013	Average annual percent change 2004–2012	Percent change 2012–2013
Number of IRF cases	495,000	371,000	373,000	373,000	–3.5%	0.0%
Cases per 10,000 FFS beneficiaries	135.6	101.7	100.1	99.7	–3.7	–0.4
Payment per case	$13,290	$17,398	$17,995	$18,258	3.9	1.5
Average length of stay (in days)	12.7	13.0	12.9	12.9	0.3	–0.4

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). Numbers of cases reflect Medicare FFS utilization only. Yearly figures presented in the table are rounded, but percent change columns were calculated using unrounded data.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- The number of Medicare FFS IRF cases grew rapidly throughout the 1990s and the early years of the IRF prospective payment system, reaching a peak of about 495,000 in 2004.
- After CMS renewed its enforcement of the compliance threshold in 2004, IRF volume declined substantially. Between 2004 and 2008 (data not shown), the number of IRF cases fell almost 8 percent per year. After 2008, volume began in increase slowly. Between 2012 and 2013, volume was stable, remaining at about 373,000 cases.
- In recent years, the number of IRF cases per 10,000 FFS beneficiaries has held steady at about 100. Relatively few Medicare beneficiaries use IRF services because, to qualify for Medicare coverage, IRF patients must be able both to tolerate and benefit from intensive rehabilitation therapy, which typically consists of at least three hours of therapy a day for at least five days a week.
- Medicare payments per IRF case rose almost 4 percent per year between 2004 and 2012. Payments per case grew 1.5 percent between 2012 and 2013.

Chart 8-13. Most common types of inpatient rehabilitation facility cases, 2013

Type of case	Share of cases
Stroke	19.4%
Fracture of the lower extremity	12.5
Neurological disorders	12.4
Debility	10.2
Major joint replacement of lower extremity	9.0
Brain injury	8.2
Other orthopedic conditions	7.7
Cardiac conditions	5.4
Spinal cord injury	4.6
All other	10.5

Note: "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. "Neurological disorders" includes multiple sclerosis, Parkinson's disease, and polyneuropathy. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur and hip and knee replacements. "All other" includes conditions such as amputations, major multiple trauma, and pain syndrome. Numbers may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

- In 2013, the most frequent diagnosis for Medicare patients in inpatient rehabilitation facilities (IRFs) was stroke, representing almost 20 percent of cases.
- Major joint replacement cases represented 9 percent of IRF admissions in 2013, down from 24 percent in 2004, when major joint replacement was the most common IRF Medicare case type.
- The share of cases represented by patients with neurological disorders has been steadily increasing since 2004, while the share of major joint replacement cases has been steadily decreasing. The share of neurological disorders exceeded the share of major joint replacement for the first time in 2012 and continued in 2013.

Chart 8-14. Inpatient rehabilitation facilities' Medicare margin by type of facility, 2004–2013

	2004	2006	2008	2010	2011	2012	2013
All IRFs	16.7%	12.3%	9.3%	8.7%	9.9%	11.3%	11.4%
Hospital based	12.2	9.6	3.8	–0.4	–0.2	0.8	0.3
Freestanding	24.7	17.4	18.1	21.3	23.2	24.0	24.1
Urban	17.0	12.6	9.5	9.0	10.3	11.7	11.8
Rural	13.2	10.1	6.9	4.8	5.3	6.5	6.4
Nonprofit	12.8	10.6	5.2	2.2	2.7	2.4	1.5
For profit	24.4	16.3	16.8	19.6	20.8	23.0	23.4

Note: IRF (inpatient rehabilitation facility).

Source: MedPAC analysis of cost report data from CMS.

- Between 2012 and 2013, the aggregate IRF Medicare margin remained almost static, rising from 11.3 percent to 11.4 percent, including the effects of the sequester. The aggregate margin has risen steadily since 2009, after a period of declining, though healthy, margins.
- Medicare margins in freestanding IRFs far exceeded those of hospital-based facilities. However, a quarter of hospital-based IRFs had Medicare margins greater than 10 percent (data not shown), indicating that many hospitals can manage their IRF units profitably. Further, despite the comparatively low average margin in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. In 2013, the aggregate Medicare margin for acute care hospitals with IRF units was a percentage point higher than the margin of hospitals without IRF units (data not shown).
- Margins also varied by ownership, with for-profit IRFs having substantially higher margins.
- Higher unit costs were the primary driver of lower margins in both hospital-based and nonprofit IRFs (data not shown).

Chart 8-15. Low standardized costs lead to high margins for both hospital-based and freestanding IRFs, 2013

Characteristic	Lowest cost quartile	Highest cost quartile
Median cost per discharge		
All	$11,227	$21,934
Hospital based	12,127	21,848
Freestanding	10,632	22,514
Median Medicare margin		
All	26.2%	–26.0%
Hospital based	21.6	–26.0
Freestanding	29.5	–23.1
Median		
Number of beds	44	17
Occupancy rate	70%	47%
Case-mix index	1.27	1.22
Share of facilities in the quartile that are:		
Hospital based	41%	5%
Freestanding	59	5
Nonprofit	31	63
For profit	65	21
Government	4	16
Urban	93	71
Rural	7	29

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for differences in wages across geographic areas and differences in case mix across providers.

Source: MedPAC analysis of Medicare cost report and Medicare Provider Analysis and Review data from CMS.

- IRFs with the lowest standardized costs (those in the lowest cost quartile) had a median standardized cost per discharge that was almost half that of the IRFs with the highest standardized costs (those in the highest cost quartile).

- IRFs in the lowest cost quartile had a median Medicare margin of 26.2 percent compared with –26.0 percent for IRFs in the highest cost quartile.

- IRFs with the lowest costs tended to be larger: The median number of beds was 44 compared with 17 in the highest cost quartile. In addition, IRFs with the lowest costs had a higher median occupancy rate (70 percent vs. 47 percent). These results suggest that low-cost IRFs benefit from economies of scale.

- Low-cost IRFs were disproportionately freestanding and for profit. Still, 41 percent of IRFs in the lowest cost quartile were hospital based and 31 percent were nonprofit. By contrast, in the highest cost quartile, 95 percent were hospital based and almost two-thirds were nonprofit.

Chart 8-16. The top 25 MS–LTC–DRGs made up two-thirds of LTCH discharges in 2013

MS–LTC–DRG	Description	Discharges	Percentage
207	Respiratory system diagnosis with ventilator support 96+ hours	16,221	11.8%
189	Pulmonary edema and respiratory failure	15,179	11.0
871	Septicemia without ventilator support 96+ hours with MCC	8,458	6.1
177	Respiratory infections and inflammations with MCC	4,324	3.1
592	Skin ulcers with MCC	3,650	2.6
208	Respiratory system diagnosis with ventilator support <96 hours	3,135	2.3
949	Aftercare with CC/MCC	3,003	2.2
539	Osteomyelitis with MCC	2,877	2.1
190	Chronic obstructive pulmonary disease with MCC	2,439	1.8
682	Renal failure with MCC	2,292	1.7
919	Complications of treatment with MCC	2,235	1.6
559	Aftercare, musculoskeletal system and connective tissue with MCC	2,123	1.5
314	Other circulatory system diagnoses with MCC	2,038	1.5
862	Postoperative and post-traumatic infections with MCC	2,026	1.5
193	Simple pneumonia and pleurisy with MCC	1,979	1.4
4	Tracheostomy with ventilator support 96+ hours or primary diagnosis except face, mouth, and neck without major OR	1,925	1.4
166	Other respiratory system OR procedures with MCC	1,917	1.4
870	Septicemia with ventilator support 96+ hours	1,817	1.3
570	Skin debridement with MCC	1,711	1.2
291	Heart failure and shock with MCC	1,664	1.2
853	Infectious and parasitic diseases with OR procedure with MCC	1,556	1.1
981	Extensive OR procedure unrelated to principal diagnosis with MCC	1,541	1.1
638	Diabetes with CC	1,447	1.0
560	Aftercare, musculoskeletal system and connective tissue with CC	1,414	1.0
602	Cellulitis with MCC	1,398	1.0
	Top 25 MS–LTC–DRGs	88,369	64.1
	Total	137,846	100.0

Note: MS–LTC–DRG (Medicare severity long-term care diagnosis related group), LTCH (long-term care hospital), MCC (major complication or comorbidity), CC (complication or comorbidity), OR (operating room). MS–LTC–DRGs are the case-mix system for LTCHs. Columns may not sum to totals due to rounding.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- Cases in LTCHs are concentrated in a relatively small number of MS–LTC–DRGs. In 2013, the top 25 MS–LTC–DRGs accounted for almost 65 percent of all cases.
- The most frequent diagnosis in LTCHs in 2013 was respiratory system diagnosis with ventilator support for more than 96 hours. Nine of the top 25 diagnoses, representing 42 percent of all cases, were respiratory conditions or involved prolonged mechanical ventilation.

Chart 8-17. The number of Medicare LTCH cases and users decreased between 2012 and 2013

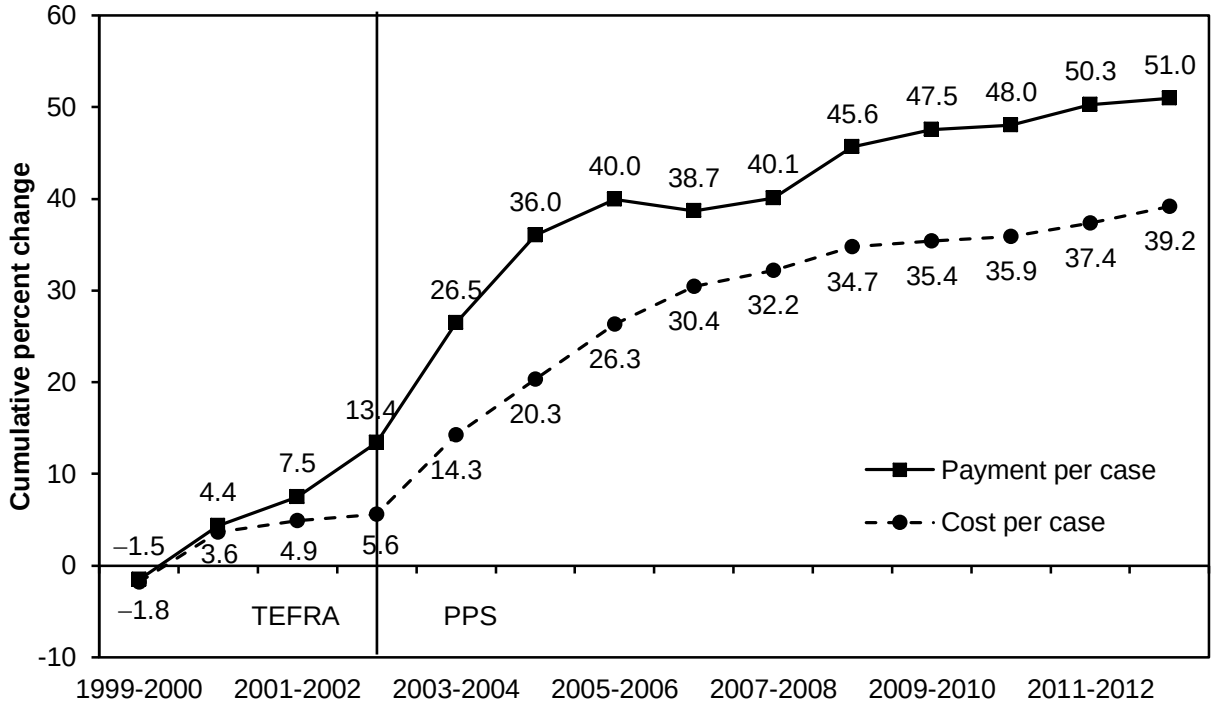
						Average annual change			
	2004	2005	2007	2012	2013	2004–2005	2005–2007	2007–2012	2012–2013
Cases	121,955	134,003	129,202	140,463	137,827	9.9%	–1.8%	1.7%	–1.9%
Cases per 10,000 FFS beneficiaries	33.4	36.4	36.3	37.7	36.8	9.0	–0.1	0.7	–2.2
Spending per FFS beneficiary	$101.3	$122.2	$126.5	$148.8	$147.6	20.7	1.7	3.3	–0.8
Payment per case	$30,059	$33,658	$34,769	$39,493	$40,070	12.0	1.6	2.6	1.5
Length of stay (in days)	28.5	28.2	26.9	26.2	26.5	–1.1	–2.3	–0.5	1.0
Users	108,814	119,282	114,299	123,652	121,532	9.6	–2.1	1.6	–1.7

Note: LTCH (long-term care hospitals), FFS (fee-for-service). Yearly figures presented in the table are rounded, but the average annual change column was calculated using unrounded data.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

- Controlling for the number of FFS beneficiaries, the number of LTCH cases declined 2.2 percent between 2012 and 2013. The decline is due at least in part to a congressional moratorium that limited growth in the number of LTCHs.
- Between 2012 and 2013, the number of beneficiaries who had LTCH stays (users) decreased by 1.7 percent.

Chart 8-18. LTCHs' per case costs increased at a rate faster than payments in 2013



Note: LTCH (long-term care hospital), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). Percent changes are calculated based on consistent two-year cohorts of LTCHs.

Source: MedPAC analysis of Medicare cost report data from CMS.

- In the first years of the PPS, costs per case increased rapidly, following a surge in payments per case.
- Between 2005 and 2008, growth in cost per case slowed considerably, as regulatory changes to Medicare's payment policies for LTCHs slowed growth in payment per case.
- Spending growth between 2010 and 2013 slowed to 2.1 percent, in part because of mandated reductions in Medicare's LTCH payment rate beginning in 2011.

Chart 8-19. The aggregate average LTCH Medicare margin fell in 2013

Type of LTCH	Share of Discharges	2008	2009	2010	2011	2012	2013
All	100%	3.7%	5.7%	6.8%	6.9%	7.4%	6.6%
Urban	95	3.9	6.0	7.1	7.0	7.5	6.8
Rural	5	–3.2	–3.0	–0.2	2.9	3.5	2.4
Nonprofit	14	–2.5	–0.7	–0.2	0.4	–0.6	–1.7
For profit	85	5.3	7.4	8.3	8.4	9.0	8.4
Government	1	N/A	N/A	N/A	N/A	N/A	N/A

Note: LTCH (long-term care hospital), N/A (not available). Margins for government-owned providers are not shown. They operate in a different context from other providers, so their margins are not necessarily comparable.

Source: MedPAC analysis of cost report data from CMS.

- After implementation of the prospective payment system, LTCHs' Medicare margins increased rapidly for all LTCH provider types, climbing to 11.9 percent in 2005 (data not shown). Margins then fell as growth in payments per case leveled off.
- From 2009 through 2012, LTCH margins climbed as providers consistently held cost growth below that of payment growth.
- In 2013, the aggregate LTCH margin fell from 7.4 percent (in 2012) to 6.6 percent, primarily because of the first year of a three-year phase-in of the downward adjustment for budget neutrality and the effect of sequestration beginning on April 1, 2013.
- Financial performance in 2013 varied across LTCHs. The aggregate Medicare margin for for-profit LTCHs (which accounted for 85 percent of all Medicare discharges from LTCHs) was 8.4 percent. The aggregate margin for nonprofit LTCHs fell from 0.4 percent in 2011 to –0.6 percent in 2012 and then –1.7 percent in 2013. This decline was due to cost growth that exceeded growth in payments. Between 2012 and 2013, per case costs for nonprofit LTCHs grew almost twice as fast as costs for for-profit LTCHs (data not shown).

SECTION 9

Medicare Advantage

Chart 9-1. MA plans available to almost all Medicare beneficiaries

	CCPs					
	HMO or local PPO	Regional PPO	Any CCP	PFFS	Any MA plan	Average plan offerings per county
2009	88%	91%	99%	100%	100%	34
2010	91	86	99	100	100	21
2011	92	86	99	63	100	12
2012	93	76	99	60	100	12
2013	95	71	99	59	100	12
2014	95	71	99	53	100	10
2015	95	70	98	47	99	9

Note: MA (Medicare Advantage), CCP (coordinated care plan), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). These data do not include plans that have restricted enrollment or are not paid based on the MA plan bidding process (special needs plans, cost plans, employer-only plans, and certain demonstration plans).

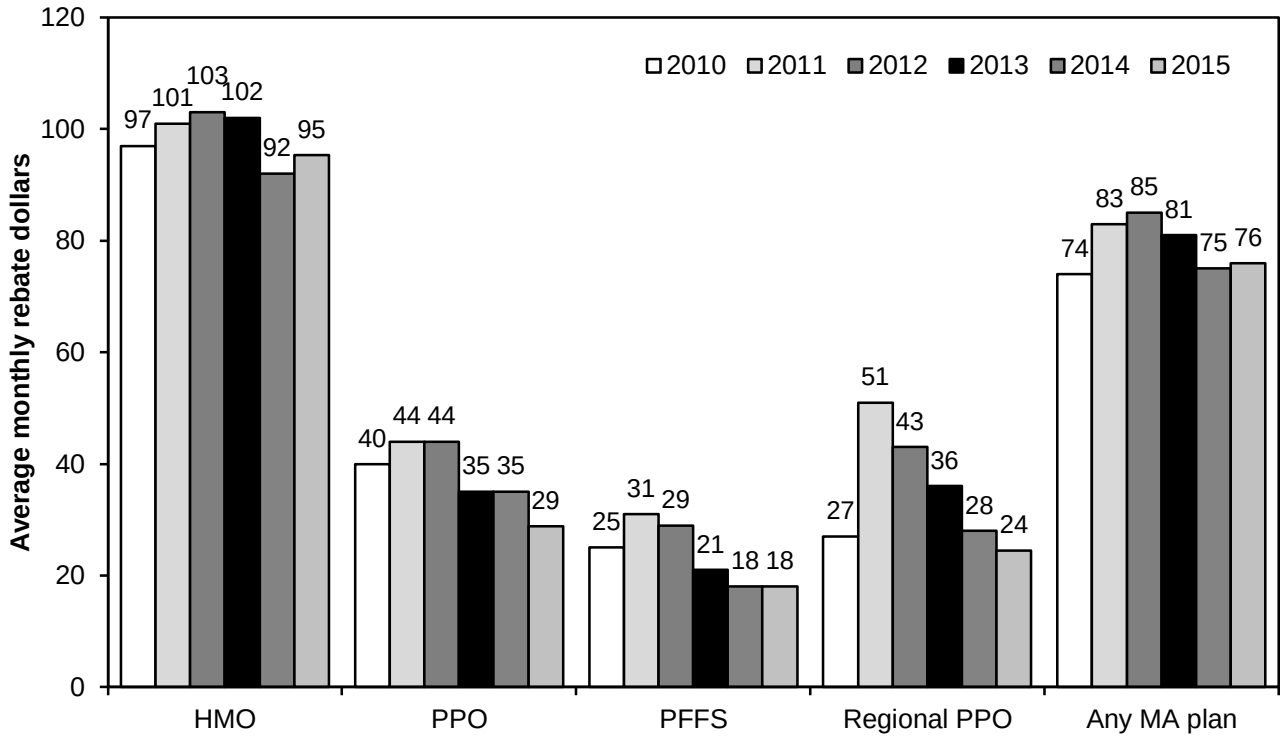
Source: MedPAC analysis of plan bid data from CMS.

- There are four types of plans, three of which are CCPs. Local CCPs include local PPOs and HMOs, which have comprehensive provider networks and limit or discourage use of out-of-network providers. Local CCPs may choose which individual counties to serve. Regional PPOs cover entire state-based regions and have networks that may be looser than those required of local PPOs. Since 2011, PFFS plans (not CCPs) are required to have networks in areas with two or more CCPs. In other areas, PFFS plans are not required to have networks, and enrollees are free to use any Medicare provider.

- Local CCPs are available to 95 percent of Medicare beneficiaries in 2015, and regional PPOs are available to 70 percent of beneficiaries; the availability of both plan types is virtually unchanged from 2013. However, the availability of MA PFFS plans has declined from 59 percent of beneficiaries in 2013 to 47 percent of beneficiaries in 2015. For the past 10 years, almost all Medicare beneficiaries have had MA plans available: 99 percent in 2015, up from 84 percent in 2005 (not shown in table).

- The number of plans from which beneficiaries may choose in 2015 is down from last year. In 2015, beneficiaries can choose from an average of nine plans operating in their counties (this figure is the simple average of plans per county; if counties were enrollee-weighted, the average would be substantially higher). This availability has decreased after peaking in 2008 and 2009, reflecting network requirements for PFFS plans and CMS's 2010 effort to reduce the number of duplicative plans and plans with low enrollment. The decrease in plan choices from 2010 to 2015 was due to the reduction in the number of PFFS and regional PPO plans.

Chart 9-2. Average monthly rebate dollars, by plan type, 2010–2015



Note: HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service), MA (Medicare Advantage).

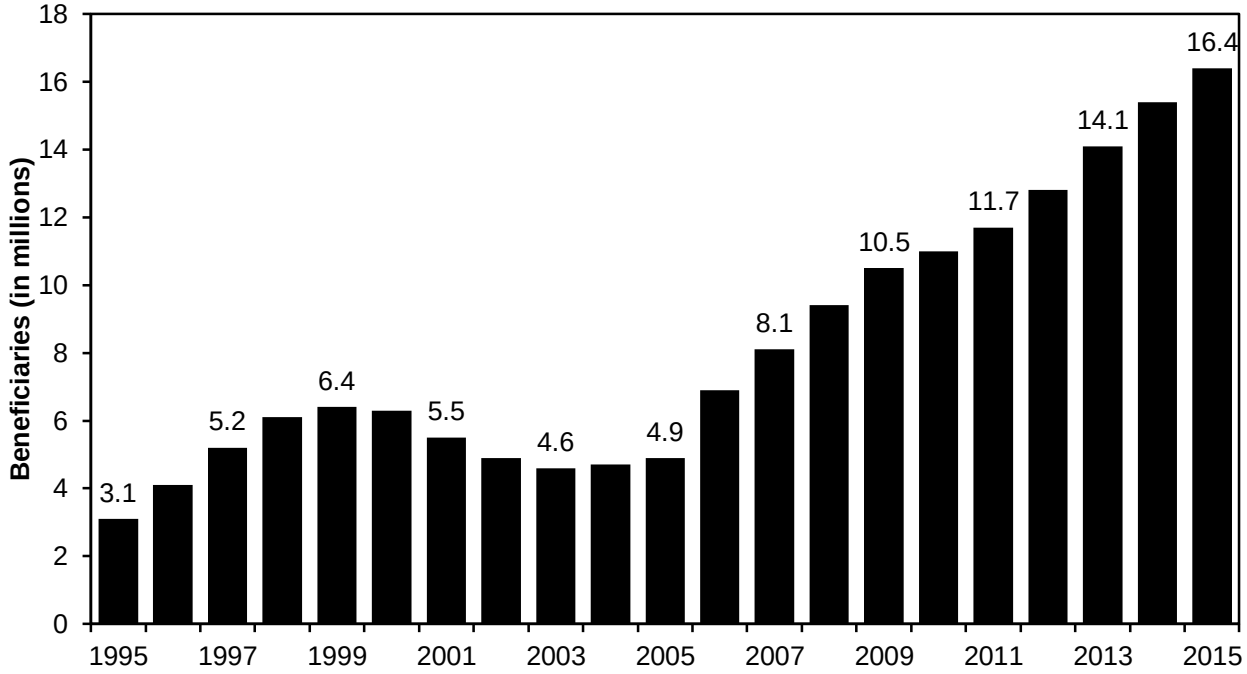
Source: MedPAC analysis of bid and plan finder data from CMS.

- Perhaps the best summary measure of plan generosity is the average rebate, which plans receive to provide additional benefits. Plans are awarded rebates for bidding under their benchmarks. The rebates must be returned to the plan members in the form of extra benefits. The extra benefits may be supplemental benefits, lower cost sharing, or lower premiums.

- HMOs have had, by far, the highest rebates because they tend to bid lower than other types of plans. Average rebates for HMOs have remained relatively stable over this period.

- For the three non-HMO categories, the rebates rose from 2010 to 2011 and declined thereafter.

Chart 9-3. Enrollment in MA plans, 1995–2015



Note: MA (Medicare Advantage).

Source: Medicare managed care contract reports and monthly summary reports, CMS.

- Medicare enrollment in MA plans that are paid on an at-risk capitated basis is at an all-time high, at 16.4 million enrollees (30 percent of all Medicare beneficiaries). Enrollment rose rapidly throughout the 1990s, peaking at 6.4 million enrollees in 1999, but then declined to a low of 4.6 million enrollees in 2003. MA enrollment has increased steadily since 2003.

Chart 9-4. Changes in enrollment vary among major plan types

Plan type	Total enrollees (in thousands) February 2011	February 2012	February 2013	February 2014	February 2015	Percent change 2014–2015
Local CCPs	9,993	11,382	12,580	13,809	14,824	7%
Regional PPOs	1,132	930	1,060	1,221	1,237	1
PFFS	588	518	417	309	260	–16

Note: CCP (coordinated care plan), PPO (preferred provider organization), PFFS (private fee-for-service). Local CCPs include health maintenance organizations and local PPOs.

Source: CMS health plan monthly summary reports.

- Enrollment in local CCPs grew by 7 percent over the past year. Enrollment in regional PPOs grew by 1 percent, while enrollment in PFFS plans continued to decline. Combined enrollment in the three types of plans grew by 6 percent from February 2014 to February 2015.

Chart 9-5. MA and cost plan enrollment by state and type of plan, 2015

State	Medicare eligibles (in thousands)	Distribution (in percent) of enrollees by plan type					
		HMO	Local PPO	Regional PPO	PFFS	Cost	Total
U.S. total	54,156	20%	8%	2%	0%	1%	31%
Alabama	956	16	8	2	0	0	25
Alaska	79	0	0	0	0	0	0
Arizona	1,103	35	3	1	0	0	39
Arkansas	590	8	3	5	4	0	20
California	5,545	38	1	0	0	0	38
Colorado	766	30	3	0	1	3	37
Connecticut	624	22	3	1	0	0	25
Delaware	177	5	3	0	0	0	8
Florida	3,921	28	3	9	0	0	40
Georgia	1,492	9	14	7	1	0	31
Hawaii	240	19	25	1	0	0	46
Idaho	275	17	15	0	0	0	33
Illinois	2,046	8	10	0	0	0	19
Indiana	1,135	3	15	5	0	0	24
Iowa	566	5	8	0	0	2	15
Kansas	482	6	6	0	1	0	14
Kentucky	854	5	14	6	0	0	26
Louisiana	781	26	2	3	0	0	30
Maine	303	14	7	0	1	0	22
Maryland	917	3	2	0	0	4	8
Massachusetts	1,201	15	3	1	0	0	19
Michigan	1,874	13	17	1	0	0	32
Minnesota	898	14	4	0	0	36	54
Mississippi	555	7	3	4	0	0	14
Missouri	1,122	19	6	3	1	0	28
Montana	197	0	16	0	2	0	18
Nebraska	309	6	3	0	2	1	12
Nevada	438	30	4	0	0	0	34
New Hampshire	260	3	2	0	2	0	7
New Jersey	1,478	12	3	0	0	0	15
New Mexico	365	20	11	0	0	0	32
New York	3,308	26	7	3	1	0	37
North Carolina	1,738	13	14	2	1	0	30
North Dakota	117	0	2	0	0	14	16
Ohio	2,126	17	18	3	0	1	38
Oklahoma	670	11	5	1	1	0	17
Oregon	735	26	18	0	0	0	44
Pennsylvania	2,507	25	14	0	0	0	40
Puerto Rico	745	71	4	0	0	0	75
Rhode Island	201	33	1	1	0	0	35
South Carolina	921	7	5	10	1	0	23
South Dakota	154	0	5	0	0	12	18
Tennessee	1,216	24	10	1	0	0	34
Texas	3,565	18	7	4	1	1	31
Utah	337	27	6	0	0	0	34
Vermont	130	0	2	3	2	0	7
Virgin Islands	19	0	0	0	0	0	0
Virginia	1,329	6	4	2	2	2	16
Washington	1,161	25	5	0	0	0	30
Washington, D.C.	87	2	4	0	0	7	13
West Virginia	413	2	20	1	2	2	27
Wisconsin	1,034	18	13	2	1	4	38
Wyoming	94	0	1	0	2	1	3

Note: MA (Medicare Advantage), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). Cost plans are not MA plans; they submit cost reports rather than bids to CMS. Component percentages may not sum to totals due to rounding.

Source: CMS enrollment and population data 2015.

Chart 9-6. MA plan benchmarks, bids, and Medicare program payments relative to FFS spending, 2015

	All plans	HMOs	Local PPOs	Regional PPOs	PFFS
Benchmarks/FFS	107%	106%	109%	102%	111%
Bids/FFS	94	90	107	97	108
Payments/FFS	102	101	107	100	111

Note: MA (Medicare Advantage), FFS (fee-for-service), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service).

Source: MedPAC analysis of plan bid data from CMS October 2014.

- Since 2006, plan bids have partly determined the Medicare payments they receive. Plans bid to offer Part A and Part B coverage to Medicare beneficiaries (Part D coverage is bid separately). The bid includes plan administrative cost and profit. CMS bases the Medicare payment for a private plan on the relationship between its bid and its applicable benchmark.

- The benchmark is an administratively determined bidding target. Legislation established the formula, being phased in by 2017, for calculating benchmarks in each county, based on percentages (ranging from 95 percent to 115 percent) of each county's per capita Medicare spending.

- If a plan's bid is above the benchmark, then the plan receives the benchmark as payment from Medicare, and enrollees have to pay an additional premium that equals the difference. If a plan's bid is below the benchmark, the plan receives its bid plus a "rebate," defined by law as a percentage of the difference between the plan's bid and its benchmark. The percentage is based on the plan's quality rating and ranges from 50 percent to 70 percent. The plan must then return the rebate to its enrollees in the form of supplemental benefits, lower cost sharing, or lower premiums.

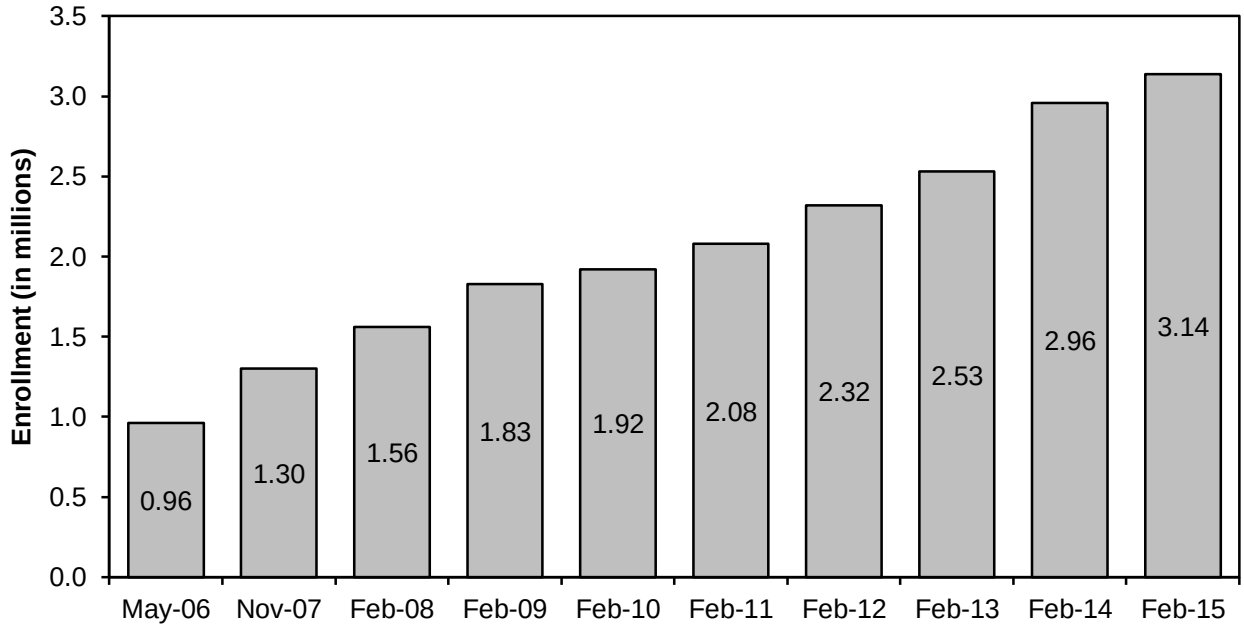
- We estimate that MA benchmarks average 107 percent of FFS spending when weighted by MA enrollment. The ratio varies by plan type because different types of plans tend to draw enrollment from different types of areas.

- Plans' enrollment-weighted bids average 94 percent of FFS spending. We estimate that HMOs bid an average of 90 percent of FFS spending, while bids from other plan types average at least 97 percent of FFS spending. These numbers suggest that HMOs can provide the same services for less than FFS in the areas where they bid, while most other plan types tend to charge more.

- We project that 2015 MA payments will be 102 percent of FFS spending. It is likely this number will decline further over the next two years as benchmarks are reduced relative to FFS levels to complete the transition to the requirements under the Patient Protection and Affordable Care Act of 2010.

- The ratio of payments relative to FFS spending varies by the type of MA plan. HMO and regional PPO payments are estimated to be 101 percent and 100 percent of FFS, respectively, while payments to PFFS and local PPOs average 111 percent and 107 percent of FFS, respectively.

Chart 9-7. Enrollment in employer group MA plans, 2006–2015



Note: MA (Medicare Advantage).

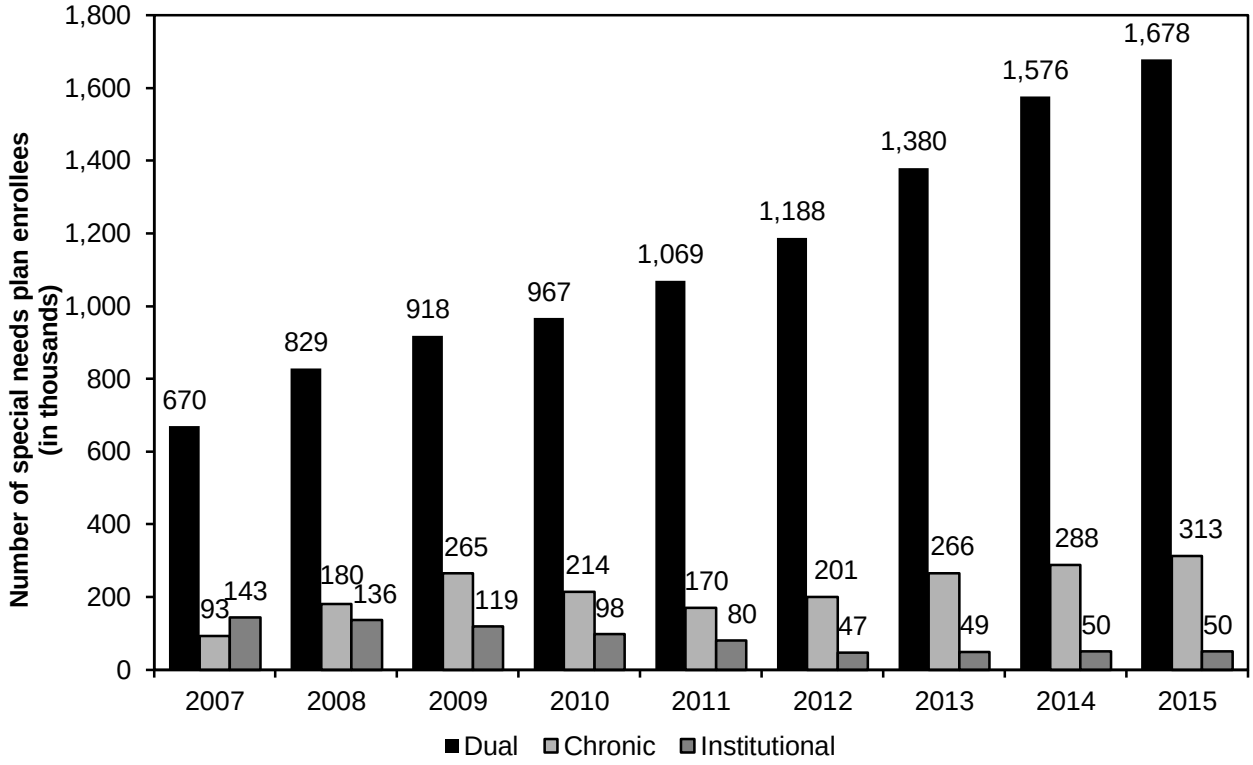
Source: CMS enrollment data.

- While most MA plans are available to any Medicare beneficiary residing in a given area, some MA plans are available only to retirees whose Medicare coverage is supplemented by their former employer or union. These plans are called employer group plans. Such plans are usually offered through insurers and are marketed to groups formed by employers or unions rather than to individual beneficiaries.

- As of February 2015, about 3 million enrollees were in employer group plans, or about 19 percent of all MA enrollees.

- Our analysis of MA bid data shows that employer group plans on average have bids that are higher relative to FFS spending than individual plans, meaning that group plans appear to be less efficient than individual market MA plans. Employer group plans bid an average of 105 percent of FFS, compared with 92 percent of FFS for individual plans (not shown in chart).

Chart 9-8. Number of special needs plan enrollees, 2007–2015



Source: CMS special needs plans comprehensive reports, May 2007, April 2008–2015.

- The Congress created special needs plans (SNPs) as a new Medicare Advantage (MA) plan type in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to provide a common framework for the existing plans serving special needs beneficiaries and to expand beneficiaries' access to and choice among MA plans.

- SNPs were originally authorized for five years. SNP authority was extended several times, often subject to new requirements, most recently in the Medicare Access and CHIP Reauthorization Act of 2015. Absent further congressional action, SNP authority will expire at the end of 2018.

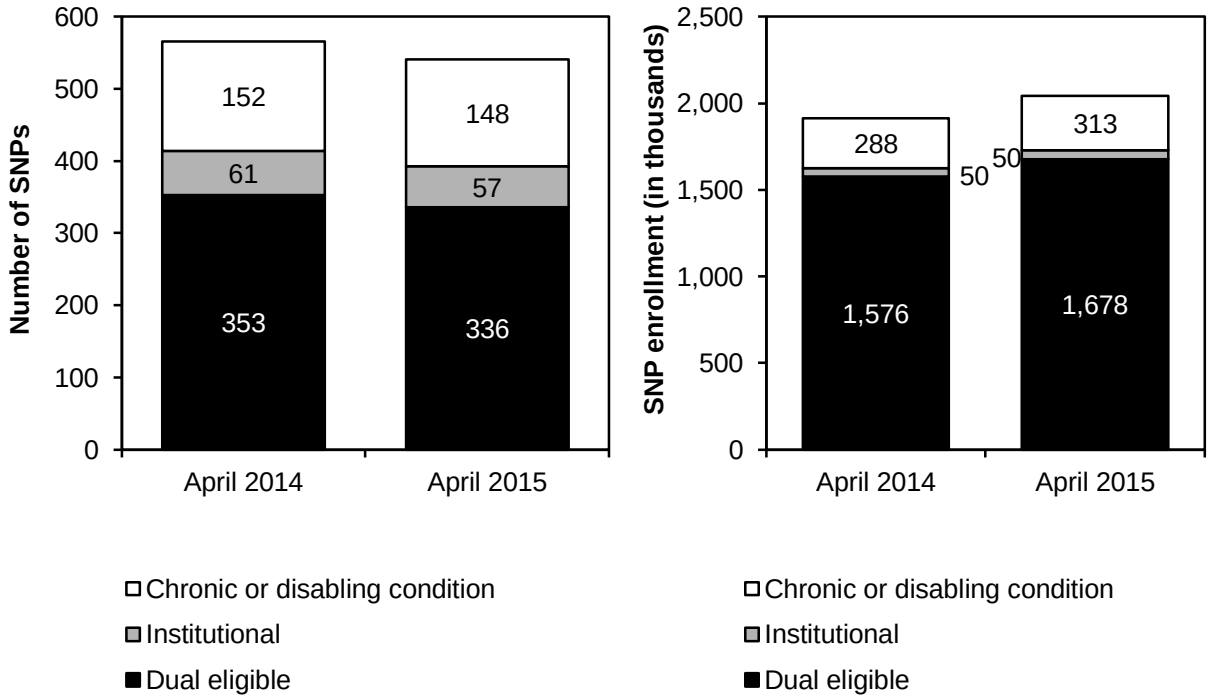
- CMS approves three types of SNPs: dual-eligible SNPs enroll only beneficiaries dually entitled to Medicare and Medicaid, chronic condition SNPs enroll only beneficiaries who have certain chronic or disabling conditions, and institutional SNPs enroll only beneficiaries who reside in institutions or are nursing-home certified.

- Enrollment in dual-eligible SNPs has grown continuously and is about 1.7 million in 2015.

- Enrollment in chronic condition SNPs has fluctuated as plan requirements have changed.

- Enrollment in institutional SNPs declined steadily through 2012 but has held steady over the last couple of years.

Chart 9-9. Number of SNPs declined and SNP enrollment rose from 2014 to 2015



Note: SNP (special needs plan).

Source: CMS special needs plans comprehensive reports, April 2014 and 2015.

- The number of SNPs decreased by 4 percent from April 2014 to April 2015, and the number of SNP enrollees increased by 7 percent.
- In 2015, most SNPs (62 percent) are for dual-eligible beneficiaries, while 27 percent are for beneficiaries with chronic conditions, and 11 percent are for beneficiaries who reside in institutions (or reside in the community but have a similar level of need).
- Enrollment in SNPs has grown from 0.9 million in May 2007 (not shown) to 2 million in April 2015.
- The availability of SNPs varies by type of special needs population served (data not shown). In 2015, 82 percent of beneficiaries reside in areas where SNPs serve dual-eligible beneficiaries (unchanged from 2014), 47 percent live where SNPs serve institutionalized beneficiaries (also unchanged from 2014), and 55 percent live where SNPs serve beneficiaries with chronic conditions (up from 51 percent).

Chart 9-10. Twenty most common condition categories among MA beneficiaries, defined in the CMS–HCC model, 2013

Conditions (defined by HCC)	Percent of beneficiaries with listed condition	Percent of beneficiaries with listed condition and no others
Vascular disease	15.0%	1.6%
Renal failure	14.3	1.5
Diabetes without complications	14.0	5.0
COPD	13.5	1.9
Specified heart arrhythmias	10.9	1.3
CHF	10.8	0.4
Polyneuropathy	10.3	0.6
Major depressive, bipolar, and paranoid disorders	7.6	1.4
Angina pectoris/old myocardial infarction	7.5	0.7
Diabetes with renal or peripheral circulatory manifestation	6.9	0.3
Breast, prostate, colorectal, and other cancers and tumors	6.6	1.8
Rheumatoid arthritis and inflammatory connective tissue disease	5.1	1.0
Diabetes with neurologic or other specified manifestation	4.4	0.5
Cardio-respiratory failure and shock	3.3	0.1
Ischemic or unspecified stroke	2.6	0.2
Seizure disorders and convulsions	2.4	0.3
Major complications of medical care and trauma	2.3	0.2
Drug/alcohol dependence	1.8	0.1
Unstable angina and other acute ischemic heart disease	1.7	0.1
Diabetes with ophthalmologic or unspecified manifestation	1.7	0.5
Vascular disease with complications	1.6	0.1

Note: MA (Medicare Advantage), CMS–HCC (CMS–hierarchical condition category), COPD (chronic obstructive pulmonary disease), CHF (congestive heart failure).

Source: MedPAC analysis of Medicare data files from Acumen LLC.

- CMS uses the CMS–HCC model to risk adjust capitated payments to MA plans so that payments better reflect the clinical needs of MA enrollees given the number and severity of their clinical conditions. The CMS–HCC model uses beneficiaries' conditions, which are collected into HCCs, to adjust the capitated payments.
- CMS is transitioning to a version of the CMS–HCC model that has 79 HCCs, but the year of this analysis is 2013, when the CMS–HCC model included 70 HCCs. The 2013 version had 5 diabetes HCCs, and 4 are among the 20 most common HCCs, including the most common one. Two categories for vascular disease are also among the 20 most common HCCs.

Chart 9-11. Medicare private plan enrollment patterns by age and Medicare–Medicaid dual-eligible status, December 2013

	As percent of Medicare population	Percent of category in FFS	Percent of category in plans
All beneficiaries	**100%**	**72%**	**28%**
Aged (65 or older)	83	71	29
Under 65	17	78	22
Not dual eligible	**82**	**72**	**28**
Aged (65 or older)	73	71	29
Under 65	9	77	23
Dual eligible	**18**	**74**	**26**
Aged (65 or older)	10	70	30
Under 65	8	80	20
Dual-eligible beneficiaries by category (all ages)			
Full dual eligibility	**13**	**81**	**19**
Beneficiaries with partial dual eligibility			
QMB only	2	68	32
SLMB only	2	60	40
QI	1	56	44

Note: FFS (fee-for-service), QMB (qualified Medicare beneficiary), SLMB (specified low-income beneficiary), QI (qualifying individual). "Dual-eligible beneficiaries" are eligible for Medicare and Medicaid. See accompanying text for an explanation of the categories of dual-eligible beneficiaries. Plans include Medicare Advantage plans and cost-reimbursed plans. Data exclude Puerto Rico because of the inability to determine specific dual-eligible categories. As of December 2013, Puerto Rico had 532,000 Medicare Advantage enrollees, which is nearly three-quarters of the Medicare-eligible population. Dual-eligible special needs plans in Puerto Rico had 258,000 enrollees in December 2013.

Source: MedPAC analysis of 2013 denominator file.

- Recent levels of Medicare plan enrollment among the dually eligible represent a significant increase over earlier years. In 2004, only 1 percent of dual-eligible beneficiaries were enrolled in plans, compared with 16 percent of non-dual-eligible beneficiaries.

- A substantial share of dual-eligible beneficiaries (43 percent (not shown in table)) are under the age of 65 and entitled to Medicare on the basis of disability or end-stage renal disease. Beneficiaries under age 65 were less likely than aged beneficiaries to enroll in Medicare plans in 2013 (22 percent vs. 29 percent).

- Dual-eligible beneficiaries who have full dual eligibility—that is, those who have coverage for their Medicare out-of-pocket costs (premiums and cost sharing) as well as coverage for services such as long-term care services and supports—are less likely to enroll in Medicare plans than beneficiaries with "partial" dual eligibility. Full dual-eligibility categories consist of beneficiaries with coverage through state Medicaid programs that include drug coverage, as well as certain QMBs and SLMBs who also have Medicaid coverage for services. The latter two categories are referred to as QMB Plus and SLMB Plus beneficiaries. Beneficiaries with partial dual eligibility have coverage for Medicare premiums (through the QI or SLMB program) or Medicare cost sharing in addition to premiums, in the case of the QMB program. SLMB-only and QI beneficiaries have higher rates of plan enrollment (40 percent and 44 percent, respectively) than any other category shown in this chart, and the rates are higher than the average rate (28 percent) across all Medicare beneficiaries in 2013.

Chart 9-12. Distribution of MA plans and enrollment by CMS overall star ratings, March 2015

Plans and enrollment	Year 2015 star ratings: Number of stars							
	5	4.5	4	3.5	3	2.5	2	Any star rating
All plan types								
Number of plans	11	61	86	136	73	26	1	394
As share of rated plans	10%	21%	35%	23%	10%	2%	<1%	100%
HMOs								
Number of plans	11	44	60	84	58	17	1	275
As share of HMO enrollees	14%	20%	29%	24%	11%	1%	<1%	100%
Local PPOs								
Number of plans	0	17	23	44	10	8	0	102
As share of local PPO enrollees	N/A	32%	47%	17%	1%	3%	N/A	100%
Regional PPOs								
Number of plans	0	0	1	5	3	1	0	10
As share of regional PPO enrollees	N/A	N/A	40%	28%	26%	6%	N/A	100%
PFFS								
Number of plans	0	0	2	3	2	0	0	7
As share of PFFS enrollees	N/A	N/A	66%	26%	8%	N/A	N/A	100%

Note: MA (Medicare Advantage), HMO (health maintenance organization), PPO (preferred provider organization), N/A (not applicable), PFFS (private fee-for-service). For purposes of this table, a "plan" is an MA contract, which can consist of several options with different benefit packages that are also referred to as plans. Cost-reimbursed HMO plans are included in the data. Numbers may not sum to 100 percent due to rounding; enrollment totals are rounded results of the sum of unrounded numbers. In 2015, star ratings ranged from 2.0 to the maximum 5.0 (the highest possible star rating).

Source: MedPAC analysis of CMS star ratings and enrollment data 2015.

- The star rating system is a composite measure of clinical processes and outcomes, patient experience measures, and measures of a plan's administrative performance. The overall star rating includes performance on Part C measures and Part D measures.

- The average overall star rating across all plans is 3.64, or 3.96 on an enrollment-weighted basis. There are 151 plans, with nearly 500,000 enrollees, that do not have a star rating because they are too new to be rated or there is insufficient information on which to base a rating.

(Chart continued next page)

Chart 9-12. Distribution of MA plans and enrollment by CMS overall star ratings, March 2015 (continued)

- Under the statutory provisions that introduced quality bonus payments in 2012, plans with ratings of 4 stars or more receive bonus payments in the form of an increase in their benchmarks. Plan star ratings also determine the level of rebate dollars, with higher rated plans able to use a higher proportion of the difference between the plan bid and benchmark amounts to provide extra benefits to enrollees.

- Plans with a 5-star rating are able to enroll beneficiaries outside of the annual election period, on a year-round basis. The 5-star status of such plans is highlighted in the Medicare.gov website's Medicare Plan Finder.

- HMOs are the only plan type for which there are 5-star plans. Nine MA HMO plans and two cost-reimbursed HMO plans have 5-star ratings. The highest star rating attained by any local PPO is 4.5, whereas the highest rating for a regional PPO or PFFS plan is 4. The majority of enrollees in regional PPO plans are in plans with a star rating below 4 stars.

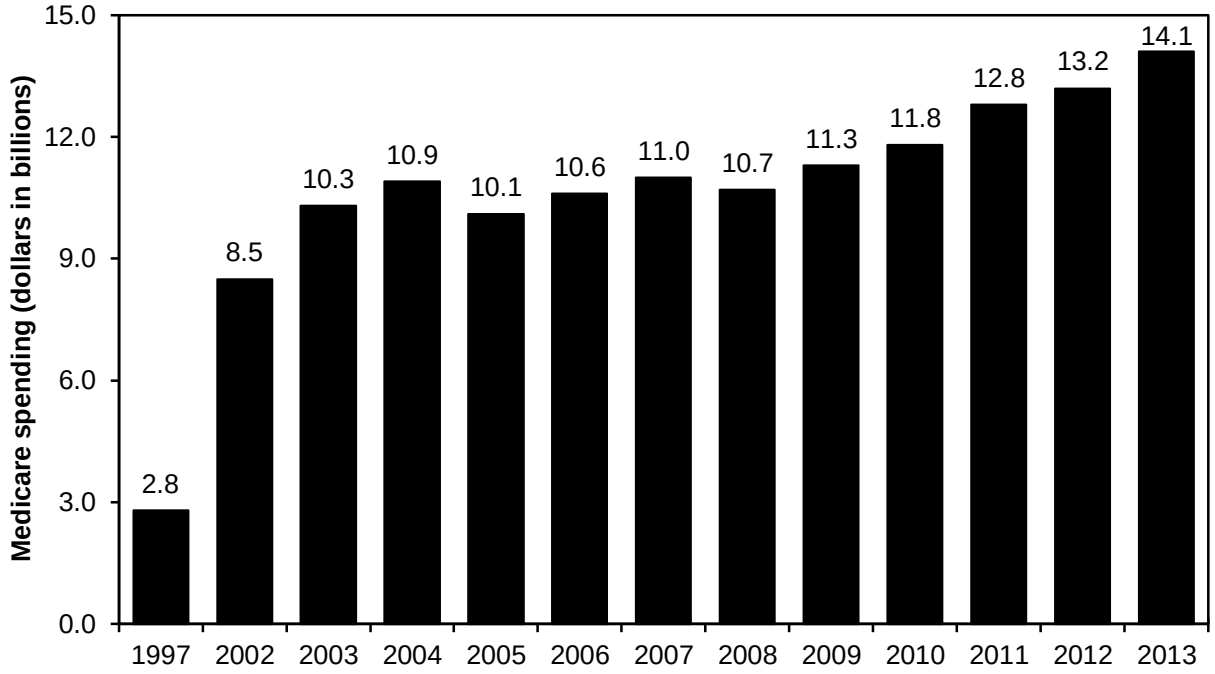
- Plans with ratings below 3 stars have an indicator of their status in the Medicare Plan Finder. CMS has the authority to terminate plans that have had three consecutive years of poor performance (a star rating below 3 stars) in either their MA or Part D performance.

- The criteria for determining plan star ratings change from year to year. Therefore, plan ratings across years are not entirely comparable. Beginning in 2012, a weighting approach was used that assigns greater weight to outcome measures and patient experience measures, with less weight assigned to process and administrative measures. In 2015, a little over two-thirds of the weight of measures reflects Part C and Part D clinical quality measures, compared with 62 percent in 2012 and 49 percent in 2011.

SECTION 10

Prescription drugs

Chart 10-1. Medicare spending for Part B drugs furnished in physicians' offices or by suppliers



Note: Data include Part B–covered drugs administered in physicians' offices or furnished by suppliers (e.g., certain oral drugs and drugs used with durable medical equipment). Data do not include Part B–covered drugs furnished in hospital outpatient departments or dialysis facilities. "Medicare spending" includes program payments and beneficiary cost sharing. Data for 2013 include the effect of the sequester, which reduced Medicare program payments by 2 percent beginning April 1, 2013. Data reflect all Part B drugs regardless of whether they are paid based on the average sales price plus 6 percent or another payment formula.

Source: MedPAC analysis of Medicare claims data.

- Medicare spending for Part B drugs furnished in physicians' offices or by suppliers totaled about $14.1 billion in 2013, an increase of about 6.5 percent from the 2012 level.

- Medicare spending on Part B drugs furnished in physician offices or by suppliers increased at an average rate of 25 percent per year from 1997 to 2003. In 2005, the Medicare payment rate changed from one based on the average wholesale price to 106 percent of the average sales price. With the move to the new payment system, spending declined 8 percent in 2005. Since 2005, spending has increased at an average annual rate of just over 4 percent.

- Reduced use of darbepoetin alfa and epoetin alfa (annual spending has declined by more than $1.3 billion since 2005) has contributed to slower growth in physician and supplier Part B drug spending.

- Total spending displayed in the chart does not include drugs provided through hospital outpatient departments (HOPDs). Separately paid HOPD drugs have grown rapidly in recent years—from about $3.5 billion in 2009 to about $6.7 billion in 2013.

Chart 10-2. Top 10 Part B drugs furnished in physicians' offices, by suppliers, and in hospital outpatient departments (in millions), 2012 and 2013

	Total Part B drug spending		Physician and supplier Part B drug spending		Hospital outpatient Part B drug spending	
Part B drug	2012	2013	2012	2013	2012	2013
Rituximab	$1,429	$1,528	$876	$880	$553	$648
Ranibizumab	1,278	1,376	1,220	1,325	57	51
Infliximab	1,002	1,127	704	757	297	370
Pegfilgrastim	1,063	1,113	643	629	420	484
Aflibercept	27*	1,094	N/A	1,028	27	66
Bevacizumab	1,022	1,050	625	606	397	444
Immune globulin	880	960	407	431	473	529
Denosumab	493	640	347	429	146	211
Pemetrexed	517	555	292	296	225	259
Trastuzumab	468	509	273	270	196	239
Total spending, top 10 Part B drugs	**8,179**	**9,952**	**5,387**	**6,652**	**2,792**	**3,300**
Total spending, all Part B drugs	**19,230**	**20,737**	**13,191**	**14,054**	**6,039**	**6,683**

Note: N/A (not available). The 10 Part B drugs with the highest total Medicare expenditures in 2013 are displayed in the table. Data for hospital outpatient departments include only separately paid drugs. Data do not include Part B drugs furnished in dialysis facilities. Medicare spending includes Medicare program payments and beneficiary cost sharing. Data for 2013 include the effect of the sequester, which reduced Medicare program payments by 2 percent beginning April 1, 2013. Data may not sum to total due to rounding. Data reflect all Part B drugs regardless of whether they are paid based on the average sales price plus 6 percent or another payment formula.
*Data for aflibercept are not available for the physician office setting in 2012 because the product was billed under a "not-otherwise-classified" billing code.

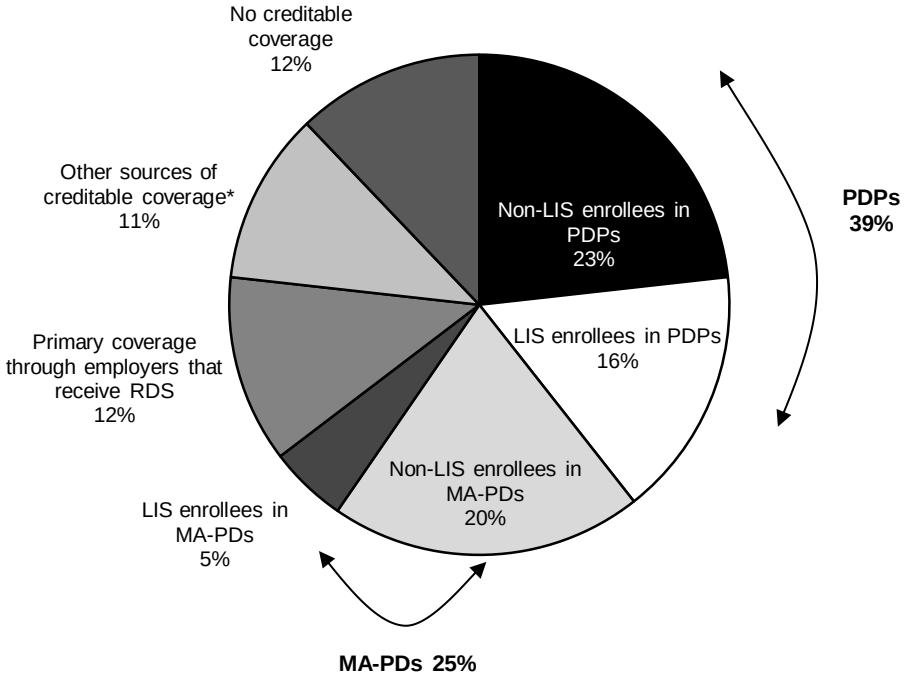
Source: MedPAC analysis of Medicare claims data from CMS.

- Medicare covers roughly 600 outpatient drugs under Part B, but spending is very concentrated. Medicare spending (including cost sharing) on the top 10 drugs, 9 of which were biologics, totaled nearly $10 billion in 2013, about 48 percent of all Part B drug spending that year.

- Total spending on Part B drugs increased by about 7.8 percent from 2012 to 2013. During this period, Medicare spending on Part B drugs grew by about 10.7 percent in hospital outpatient departments and by 6.5 percent for Part B drugs furnished by physicians or suppliers.

- Many of the top 10 drugs are used to treat cancer or its side effects (rituximab, pegfilgrastim, bevacizumab, pemetrexed, denosumab, trastuzumab). Drugs used to treat age-related macular degeneration (ranibizumab, aflibercept, and bevacizumab), rheumatoid arthritis (rituximab and infliximab), and immune disorders (immune globulin) are also included in the top 10.

Chart 10-3. In 2012, almost 90 percent of Medicare beneficiaries were enrolled in Part D plans or had other sources of creditable drug coverage



Note: LIS (low-income subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), RDS (retiree drug subsidy). Percentages may not sum to 100 due to rounding.
* "Creditable coverage" means the value of drug benefits is equal to or greater than that of the basic Part D benefit.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey Access to Care file 2012.

- Over three-quarters of Medicare beneficiaries were either signed up for Part D plans or had prescription drug coverage through employer-sponsored plans under Medicare's RDS in 2012. (If an employer agrees to provide primary drug coverage to its retirees with a benefit value that is equal to or greater than that of Part D (called "creditable coverage"), Medicare provides the employer with a tax-free subsidy for 28 percent of each eligible individual's drug costs that fall within a specified range of spending.)

- About 21 percent of Medicare beneficiaries received Part D's LIS in 2012. Among all LIS beneficiaries, about three-quarters (16 percent of all Medicare beneficiaries) were enrolled in stand-alone PDPs and the remainder (5 percent of all Medicare beneficiaries) were in MA–PD plans.

- Other enrollees in stand-alone PDPs accounted for 23 percent of all Medicare beneficiaries. Another 20 percent were in MA–PD plans or other private Medicare health plans. Individuals whose employers received Medicare's RDS accounted for 12 percent.

(Chart continued next page)

Chart 10-3. In 2012, almost 90 percent of Medicare beneficiaries were enrolled in Part D plans or had other sources of creditable drug coverage (continued)

- Other Medicare beneficiaries had creditable drug coverage, but that coverage did not affect Medicare program spending. Examples of other sources of creditable coverage include the Federal Employees Health Benefits program, TRICARE, Department of Veterans Affairs, and employers not receiving the RDS.

- About 12 percent of Medicare beneficiaries had no drug coverage or coverage that was less generous than Part D's defined standard benefit.

Chart 10-4. Changes in parameters of the Part D defined standard benefit over time

	2006	2013	2014	2015	Cumulative change 2006–2015
Deductible	$250.00	$325.00	$310.00	$320.00	28%
Initial coverage limit	2,250.00	2,970.00	2,850.00	2,960.00	32%
Annual out-of-pocket threshold	3,600.00	4,750.00	4,550.00	4,700.00	31%
Total covered drug spending at annual out-of-pocket threshold	5,100.00	6,954.52	6,690.77	7,061.76	38%
Minimum cost sharing above the annual out-of-pocket threshold					
Copay for generic/preferred multisource drugs	2.00	2.65	2.55	2.65	33%
Copay for other prescription drugs	5.00	6.60	6.35	6.60	32%

Note: Under Part D's defined standard benefit, the enrollee pays the deductible and then 25 percent of covered drug spending (75 percent paid by the plan) until total covered drug spending reaches the initial coverage limit (ICL). Before 2011, enrollees exceeding the ICL were responsible for 100 percent of covered drug spending up to the annual out-of-pocket threshold. Beginning in 2011, enrollees face reduced cost sharing in the coverage gap. For 2011 and later years, the amount of total covered drug spending at the annual out-of-pocket threshold depends on the mix of brand and generic drugs filled during the coverage gap. The amounts shown are for individuals not receiving Part D's low-income subsidy who have no other source of supplemental coverage. Cost sharing paid by most sources of supplemental coverage does not count toward this threshold. The enrollee pays nominal cost sharing above the limit.

Source: CMS, Office of the Actuary.

- The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 specified a defined standard benefit structure. In 2015, it has a $320 deductible, 25 percent coinsurance on covered drugs until the enrollee reaches $2,960 in total covered drug spending, and then a coverage gap until out-of-pocket spending reaches the annual threshold. Before 2011, enrollees were responsible for paying the full discounted price of covered drugs filled during the coverage gap. Because of changes made by the Patient Protection and Affordable Care Act of 2010, enrollees face reduced cost sharing for drugs filled in the coverage gap. In 2015, the cost sharing for drugs filled during the gap phase is 45 percent for brand-name drugs and 65 percent for generic drugs. Enrollees with drug spending that exceeds the annual threshold pay the greater of $2.65 to $6.60 per prescription or 5 percent coinsurance.

- The parameters of this defined standard benefit structure have changed over time at the same rate as the annual change in average total drug expenses of Medicare beneficiaries. The benefit parameters have generally increased over time, with the exception of 2014. (The reduction in 2014 reflects a decrease in average drug expenses CMS estimated for the period between August 2012 and July 2013.) The parameters have grown cumulatively by 28 percent to 38 percent between 2006, the year Part D began, and 2015. (Although the benefit parameters are all indexed to the same factor—the annual change in average total drug expenses—the actual changes differ across the parameters because of different rounding rules that are applied. In the case of total covered drug spending at the annual out-of-pocket threshold, the growth rate calculated is also affected by the mix of brand and generic drugs filled during the coverage gap.)

(Chart continued next page)

Chart 10-4. Changes in parameters of the Part D defined standard benefit over time (continued)

- Within certain limits, sponsoring organizations may offer Part D plans that have the same actuarial value as the defined standard benefit but a different benefit structure, and most sponsoring organizations do offer such plans. For example, a plan may use tiered copayments rather than 25 percent coinsurance or have no deductible but use cost-sharing requirements that are equivalent to a rate higher than 25 percent. Both defined standard benefit plans and plans that are actuarially equivalent to the defined standard benefit are known as “basic benefits.”

- Once a sponsoring organization offers one plan with basic benefits within a prescription drug plan region, it may also offer a plan with enhanced benefits—basic and supplemental coverage combined.

Chart 10-5. Characteristics of Medicare PDPs

	2014				2015			
	Plans		Enrollees as of February 2014		Plans		Enrollees as of February 2015	
	Number	Percent	Number (in millions)	Percent	Number	Percent	Number (in millions)	Percent
Total	1,169	100%	18.6	100%	1,001	100%	19.2	100%
Type of organization								
National[a]	725	62	16.0	86	707	71	16.4	86
Other	444	38	2.5	14	294	29	2.8	14
Type of benefit								
Defined standard	36	3	0.4	2	0	0	0.0	0
Actuarially equivalent[b]	549	47	10.2	55	454	45	10.6	55
Enhanced	584	50	7.9	43	547	55	8.6	45
Type of deductible								
Zero	553	47	8.0	43	420	42	9.3	49
Reduced	42	4	0.7	4	139	14	1.4	7
Defined standard[c]	574	49	9.8	53	442	44	8.5	44
Drugs covered in the gap								
Some coverage	244	21	2.2	12	261	26	2.0	10
None	925	79	16.4	88	740	74	17.2	90

Note: PDP (prescription drug plan). The PDPs and enrollment described here exclude employer-only plans and plans offered in U.S. territories. Figures may not sum to totals due to rounding.
[a] Reflects total number of plans for organizations with at least 1 PDP in each of the 34 PDP regions.
[b] Includes "actuarially equivalent standard" and "basic alternative" benefits.
[c] $310 in 2014 and $320 in 2015.

Source: MedPAC analysis of CMS landscape, premium, and enrollment data.

- Between 2014 and 2015, the number of stand-alone PDPs decreased by 14 percent. Plan sponsors are offering 1,001 PDPs in 2015 compared with 1,169 in 2014.
- In 2015, 71 percent of all PDPs are offered by sponsoring organizations that have at least 1 PDP in each of the 34 PDP regions. Plans offered by those national sponsors account for 86 percent of all PDP enrollment.
- For 2015, a larger share of PDP offerings include enhanced benefits (basic plus supplemental coverage) than in 2014. The share of PDPs with actuarially equivalent benefits (having the same average value as the defined standard benefit but with alternative benefit designs) declined slightly and sponsors are offering no PDPs with the defined standard benefit in 2015. Although actuarially equivalent plans continue to attract the largest share of PDP enrollees (55 percent), the share of enrollees choosing to enroll in enhanced benefit plans increased slightly from 43 percent to 45 percent between 2014 and 2015.
- Although a larger share of PDPs includes gap coverage for generic drugs in 2015 than in 2014, the majority of PDP enrollees (90 percent) continue to enroll in plans that offer no additional benefits in the coverage gap. However, because of the changes made by the Patient Protection and Affordable Care Act of 2010, the Part D benefit now includes some coverage for medications filled during the gap phase. In addition, many PDP enrollees receive Part D's low-income subsidy, which effectively eliminates the coverage gap.

Chart 10-6. Characteristics of MA–PDs

	2014				2015			
	Plans		Enrollees as of February 2014		Plans		Enrollees as of February 2015	
	Number	Percent	Number (in millions)	Percent	Number	Percent	Number (in millions)	Percent
Totals	1,615	100%	9.9	100%	1,608	100%	10.6	100%
Type of organization								
Local HMO	1,066	66	7.0	71	1,123	70	7.6	72
Local PPO	436	27	1.8	18	409	25	1.9	18
PFFS	83	5	0.2	2	50	3	0.2	2
Regional PPO	30	2	0.9	9	26	2	0.9	8
Type of benefit								
Defined standard	40	2	0.1	1	39	2	0.1	1
Actuarially equivalent*	153	9	1.0	10	268	17	2.9	27
Enhanced	1,422	88	8.8	89	1,301	81	7.6	72
Type of deductible								
Zero	1,326	82	8.5	86	1,014	63	6.0	57
Reduced	188	12	1.1	11	337	21	3.4	32
Defined standard**	101	5	0.3	3	257	16	1.2	11
Drugs covered in the gap								
Some coverage	809	50	5.1	51	703	44	4.8	45
None	806	50	4.8	49	905	56	5.8	55

Note: MA–PD (Medicare Advantage–Prescription Drug [plan]), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). The MA–PD plans and enrollment described here exclude employer-only plans, plans offered in U.S. territories, 1876 cost plans, special needs plans, demonstrations, and Part B–only plans. Numbers may not sum to totals due to rounding.
* Includes "actuarially equivalent standard" and "basic alternative" benefits.
** $310 in 2014 and $320 in 2015.

Source: MedPAC analysis of CMS landscape, premium, and enrollment data.

- There are slightly fewer MA–PD plans in 2015 than in 2014. Sponsors are offering 1,608 MA–PD plans compared with 1,615 the year before. HMOs remain the dominant kind of MA–PD plan, making up 70 percent of all (unweighted) offerings in 2015. The number of PFFS plans continues to decline, from 83 in 2014 to 50 in 2015. The number of drug plans offered by local PPOs decreased by about 6 percent (27 plans), and the number of drug plans offered by regional PPOs decreased by 13 percent (4 plans) between 2014 and 2015.
- A larger share of MA–PD plans than stand-alone prescription drug plans (PDPs) offer enhanced benefits (compare Chart 10-6 with Chart 10-5). In 2015, 55 percent of all PDPs have enhanced benefits compared with 81 percent of MA–PD plans. In 2015, enhanced MA–PD plans attracted 72 percent of total MA–PD enrollment.
- Sixty-three percent of MA–PD plans have no deductible in 2015. These plans attracted 57 percent of total MA–PD enrollees in 2015.
- MA–PD plans are somewhat less likely than PDPs to provide some additional benefits in the coverage gap. In 2015, about 44 percent of MA–PD plans include some gap coverage—a decline from 50 percent the year before. Those plans account for about 45 percent of MA–PD enrollment.

Chart 10-7. Change in average Part D premiums, 2011–2015

	Average monthly premium weighted by enrollment					Cumulative change in weighted average premium, 2011–2015
	2011	2012	2013	2014	2015	
All plans						
Basic coverage	$33	$33	$32	$29	$26	–20%
Enhanced coverage	26	26	28	30	33	24
Any coverage	30	30	30	29	30	–1
PDPs						
Basic coverage	33	33	32	30	28	–14
Enhanced coverage	63	58	49	49	48	–23
Any coverage	38	38	39	38	37	–3
MA–PDs, including SNPs*						
Basic coverage	27	27	29	25	21	–23
Enhanced coverage	12	12	13	13	16	39
Any coverage	14	14	15	16	18	31
Base beneficiary premium	32.34	31.08	31.17	32.42	33.13	2

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), SNPs (special needs plans). All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PD plans exclude Part B–only plans, demonstrations, special needs plans, and 1876 cost plans.
*Reflects the portion of Medicare Advantage plans' total monthly premium attributable to Part D benefits for plans that offer Part D coverage. MA–PD premiums reflect rebate dollars that were used to offset Part D premium costs. The fact that average premiums for enhanced MA–PD plans are lower than for basic MA–PD plans could reflect several factors such as different plan sponsors, different counties of operation, and differences in the average health status of plan enrollees.

Source: MedPAC analysis of CMS landscape, plan report, and enrollment data.

- Between 2011 and 2015, the overall average premium paid by Part D enrollees has remained very stable at about $30 per month. However, year-to-year changes have differed by the type of benefit (basic vs. enhanced coverage) and type of plan (PDP vs. MA−PD), and they generally have not corresponded to changes observed in the base beneficiary premium.

- Over the five-year period, the average enrollee premium for basic coverage in PDPs ranged from $28 to $33 and decreased by a cumulative 14 percent. The average enrollee premium for PDPs offering enhanced coverage has decreased from $63 in 2011 to $48 in 2015, a cumulative 23 percent.

- Between 2011 and 2015, the average premium paid by beneficiaries enrolled in MA−PD plans with basic coverage ranged between $21 and $29 and decreased by a cumulative 23 percent. The average premium paid by beneficiaries enrolled in MA−PD plans offering enhanced coverage has increased from $12 to $16, a cumulative 39 percent.

Chart 10-8. More premium-free (for LIS enrollees) PDPs in 2015, but some are unavailable to new enrollees

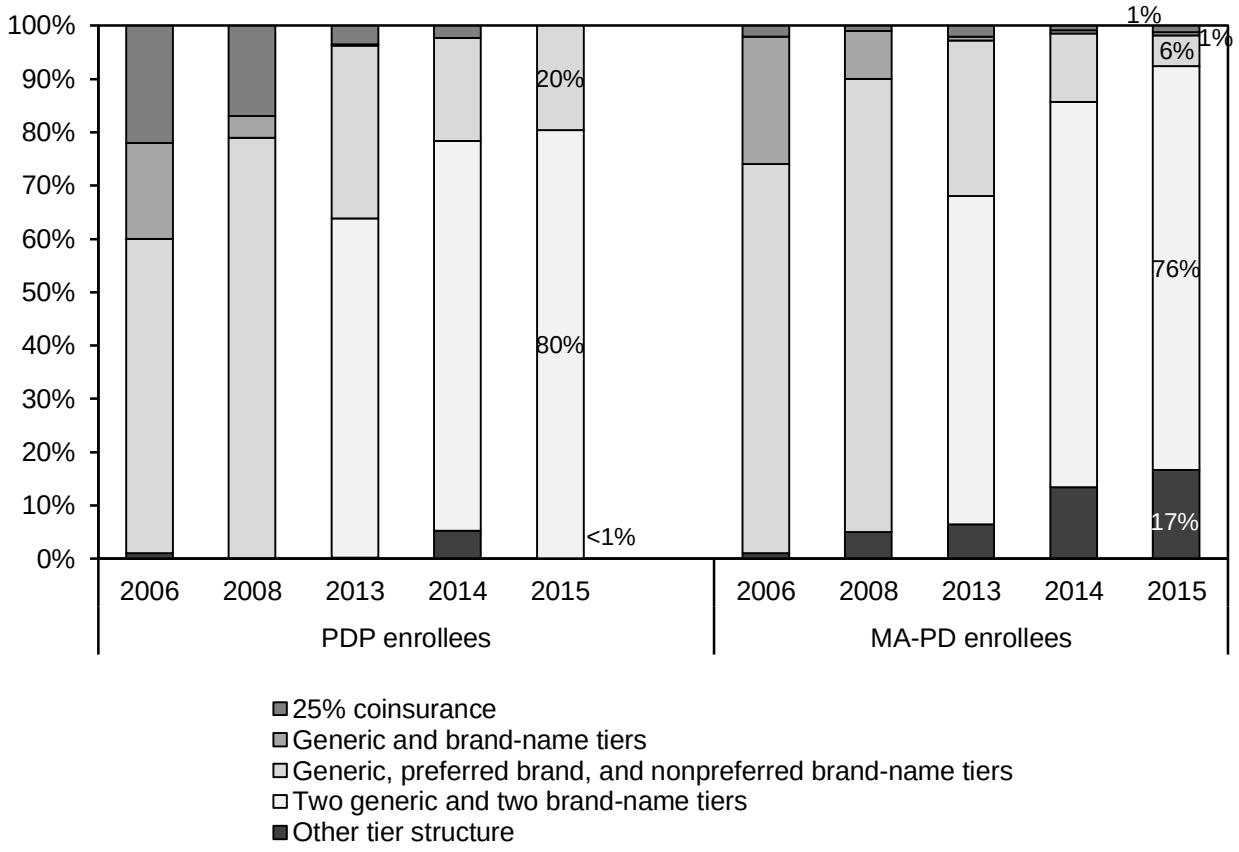
		Number of PDPs			Number of PDPs that have zero premium for LIS enrollees		
PDP region	State(s)	2014*	2015	Difference	2014*	2015	Difference
1	ME, NH	32	28	–4	7	9	2
2	CT, MA, RI, VT	33	27	–6	8	5	–3
3	NY	31	25	–6	8	8	0
4	NJ	34	29	–5	12	10	–2
5	DC, DE, MD	36	27	–9	13	10	–3
6	PA, WV	39	29	–10	13	9	–4
7	VA	35	31	–4	13	9	–4
8	NC	34	29	–5	10	8	–2
9	SC	35	31	–4	8	7	–1
10	GA	34	30	–4	9	8	–1
11	FL	35	27	–8	5	4	–1
12	AL, TN	35	30	–5	11	12	1
13	MI	36	31	–5	13	10	–3
14	OH	37	31	–6	12	8	–4
15	IN, KY	35	31	–4	15	10	–5
16	WI	33	29	–4	12	8	–4
17	IL	38	33	–5	14	10	–4
18	MO	35	31	–4	8	6	–2
19	AR	34	29	–5	12	6	–6
20	MS	33	28	–5	13	9	–4
21	LA	33	28	–5	14	11	–3
22	TX	36	32	–4	11	10	–1
23	OK	36	31	–5	12	10	–2
24	KS	33	29	–4	13	7	–6
25	IA, MN, MT, ND, NE, SD, WY	34	30	–4	10	5	–5
26	NM	36	31	–5	7	7	0
27	CO	34	30	–4	5	7	2
28	AZ	34	30	–4	11	12	1
29	NV	34	32	–2	4	4	0
30	OR, WA	35	30	–5	12	10	–2
31	ID, UT	37	31	–6	13	12	–1
32	CA	36	32	–4	9	6	–3
33	HI	29	25	–4	4	9	5
34	AK	28	24	–4	11	7	–4
	Total	1,169	1,001	–168	352	283	–69

Note: LIS (low-income subsidy), PDP (prescription drug plan).
*Includes 27 plans in 2014 and 2015 that did/may not accept new enrollees because of CMS sanctions.

Source: MedPAC based on 2014 and 2015 PDP landscape file provided by CMS.

- The total number of stand-alone PDPs decreased by 14 percent, from 1,169 in 2014 to 1,001 in 2015. The median number of plans offered in PDP regions decreased to 30 plans from 35 in 2014 (not shown in chart). AK had the fewest stand-alone PDPs, with 24; IL had the most, with 33.
- In 2015, 283 PDPs qualified to be premium free to LIS enrollees, with at least 4 PDPs available in any given region. However, 27 plans were not accepting new enrollees because of CMS sanctions, reducing the number of premium-free options available to 256 plans.

Chart 10-9. In 2015, most Part D enrollees are in plans that use a five-tier formulary structure



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Calculations are weighted by enrollment. All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PD plans exclude demonstration programs, special needs plans, and 1876 cost plans. Components may not sum to totals due to rounding. Over 95 percent of PDPs and MA−PDs have a specialty tier in addition to the tiers listed above.

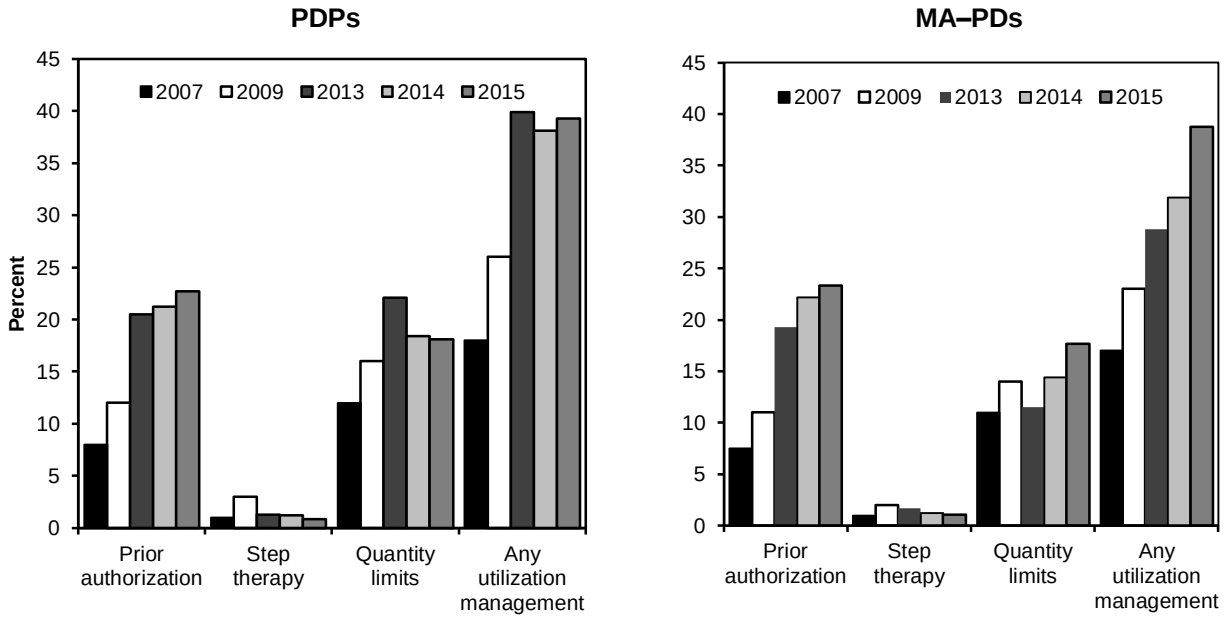
Source: MedPAC-sponsored analysis by NORC/Georgetown University/Social and Scientific Systems analysis of formularies submitted to CMS.

- Most Part D enrollees continue to choose plans that distinguish between preferred and nonpreferred brand-name drugs, with an increasing number choosing a formulary that also distinguishes between preferred and nonpreferred generic drugs. In 2015, 80 percent of PDP enrollees are in plans that have two generic and two brand-name tiers, an increase from 73 percent in 2014. About 76 percent of MA–PD enrollees are in such plans in 2015, up from 72 percent in 2014.

- For enrollees in PDPs with two generic and two brand-name tiers, the median copay in 2015 is $38 for a preferred brand and $80 for a nonpreferred brand. The median copay for generic drugs is $1 for preferred-tier drugs and $4 for nonpreferred-tier drugs. For MA–PD enrollees, in 2015, the median copay is $45 for a preferred brand, $95 for a nonpreferred brand, and $3 and $10 for a generic drug on preferred and nonpreferred tiers, respectively. In 2015, some plans are offering a “value” tier with low or no copays.

- Most plans also use a specialty tier for drugs that have a negotiated price of $600 per month or more. In 2015, median cost sharing for a specialty tier drug is 29 percent among PDPs and 33 percent among MA–PD plans.

Chart 10-10. In 2015, use of prior authorization continues to increase for both PDPs and MA–PDs



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Calculations are weighted by enrollment. All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PD plans exclude demonstration programs, special needs plans, and 1876 cost plans. Values reflect the share of listed chemical entities that are subject to utilization management, weighted by plan enrollment. "Prior authorization" means that the enrollee must get preapproval from the plan before coverage. "Step therapy" refers to a requirement that the enrollee try specified drugs before being prescribed other drugs in the same therapeutic category. "Quantity limits" means that plans limit the number of doses of a drug available to the enrollee in a given time period.

Source: MedPAC-sponsored analysis by NORC/Georgetown University/Social and Scientific Systems of formularies submitted to CMS.

- The number of drugs listed on a plan's formulary does not necessarily represent beneficiary access to medications. Plans' processes for nonformulary exceptions, prior authorization (preapproval from plans before coverage), quantity limits (plan limitations on the number of doses of a particular drug covered in a given period), and step therapy requirements (enrollees must try specified drugs before being prescribed other drugs in the same therapeutic category) can affect access to certain drugs.

- In 2015, the average enrollee in a stand-alone PDP faces some form of utilization management for about 39 percent of drugs listed on a plan's formulary, a slight increase from 38 percent in 2014. Likewise, the average MA–PD enrollee faces some form of utilization management for 39 percent of drugs listed on a plan's formulary, a sizable increase from 32 percent in 2014. Part D plans typically use quantity limits or prior authorization to manage enrollees' prescription drug use.

- In 2015, the share of drugs listed on plan formularies that require quantity limits remained the same as in 2014, at 18 percent among stand-alone PDPs. Among MA–PDs, the use of quantity limits increased from about 14 percent of listed drugs to 18 percent. The share of drugs listed on plan formularies that require the use of step therapy remained very low for both stand-alone PDPs and MA–PDs.

Chart 10-11. Characteristics of Part D enrollees, 2013

	All Medicare	Part D	Plan type		Subsidy status	
			PDP	MA–PD	LIS	Non-LIS
Beneficiaries[a] (in millions)	55.1	37.8	24.2	13.7	12.4	25.4
Percent of all Medicare	100%	69%	44%	25%	22%	46%
Gender						
Male	45%	42%	42%	43%	40%	44%
Female	55	58	58	57	60	56
Race/ethnicity						
White, non-Hispanic	76	74	77	69	56	83
African American, non-Hispanic	10	11	11	11	20	7
Hispanic	9	10	7	14	16	7
Asian	3	3	3	3	5	2
Other	2	2	2	2	2	2
Age (years)[b]						
<65	19	20	22	16	42	9
65–69	26	23	22	26	15	27
70–74	19	20	19	22	12	23
75–79	14	14	14	15	10	16
80+	22	23	23	21	19	24
Urbanicity[c]						
Metropolitan	81	82	78	89	80	83
Micropolitan	10	10	12	7	11	10
Rural	8	8	10	4	9	7

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income subsidy). Percentages may not sum to 100 due to rounding.
[a] Figures for Medicare and Part D include all beneficiaries with at least one month of enrollment in the respective program. A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. For individuals who switch plan types during the year, classification into plan types is based on the greater number of months of enrollment.
[b] Age as of July 2013.
[c] Urbanicity is based on the Office of Management and Budget's core-based statistical areas as of February 2013. A metropolitan area contains a core urban area of 50,000 or more people, and a micropolitan area contains an urban core of at least 10,000 (but fewer than 50,000) people. About 1 percent of Medicare beneficiaries were excluded because of an unidentifiable core-based statistical area designation.

Source: MedPAC analysis of Medicare Part D denominator and Risk Adjustment System files from CMS.

- In 2013, 37.8 million Medicare beneficiaries (69 percent) enrolled in Part D at some point in the year. Most of them (24.2 million) were in stand-alone PDPs, with 13.7 million in MA–PD plans. Over 12 million enrollees received Part D's LIS.
- Compared with the overall Medicare population, Part D enrollees are more likely to be female and non-White. MA–PD enrollees are less likely to be disabled beneficiaries under age 65 and more likely to be Hispanic compared with PDP enrollees; LIS enrollees are more likely to be female, non-White, and disabled beneficiaries under age 65 compared with non-LIS enrollees.
- Patterns of enrollment by urbanicity for Part D enrollees were similar to the overall Medicare population, with 82 percent in metropolitan areas, 10 percent in micropolitan areas, and the remaining 8 percent in rural areas.

Chart 10-12. Part D enrollment trends, 2007–2013

	2007	2010	2013	Average annual growth rate 2007–2010	2010–2013	2007–2013
Part D enrollment (in millions)*						
Total	26.1	29.7	37.8	4.4%	8.4%	6.4%
By plan type						
PDP	18.3	18.9	24.2	1.1	8.5	4.7
MA–PD	7.8	10.6	13.7	10.9	8.8	9.9
By subsidy status						
LIS	10.4	11.3	12.4	2.7	3.1	2.9
Non-LIS	15.7	18.4	25.4	5.5	11.4	8.4
By race/ethnicity						
White, non-Hispanic	19.4	22.0	28.1	4.3	8.5	6.4
African American, non-Hispanic	2.9	3.3	4.2	4.1	8.0	6.0
Hispanic	2.5	3.0	3.6	5.8	7.0	6.4
Other	1.3	1.4	1.9	3.9	10.6	7.2
By age (years)**						
<65	5.5	6.3	7.5	4.7	6.2	5.5
65–69	5.4	6.6	8.8	6.5	10.5	8.5
70–79	8.8	9.9	13.0	3.8	9.5	6.6
80+	6.4	7.1	8.5	3.2	6.5	4.8
Part D enrollment (in percent)						
Total	100%	100%	100%			
By plan type						
PDP	70	64	64			
MA–PD	30	36	36			
By subsidy status						
LIS	40	38	33			
Non-LIS	60	62	67			
By race/ethnicity						
White, non-Hispanic	74	74	74			
African American, non-Hispanic	11	11	11			
Hispanic	10	10	10			
Other	5	5	5			
By age (years)**						
<65	21	21	20			
65–69	21	22	23			
70–79	34	33	34			
80+	25	24	23			

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income [drug] subsidy). A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. If a beneficiary was enrolled in both a PDP and an MA–PD plan during the year, that individual was classified into the type of plan with the greater number of months of enrollment. Numbers may not sum to totals due to rounding.
*Figures include all beneficiaries with at least one month of enrollment.
**Age as of July of the respective year.

Source: MedPAC analysis of Medicare Part D denominator file from CMS.

(Chart continued next page)

Chart 10-12. Part D enrollment trends, 2007–2013 (continued)

- Part D enrollment grew faster between 2010 and 2013 (average annual growth rate (AAGR) of 8.4 percent) than between 2007 and 2010 (AAGR of 4.4 percent). Between 2010 and 2013, the largest growth in enrollment was observed for beneficiaries ages 65 to 69 (10.5 percent annually, on average), followed by beneficiaries ages 70 to 79 (9.5 percent annually, on average).

- While MA–PD plan enrollment grew faster between 2007 and 2010 (nearly 11 percent annually compared with about 1 percent annually, on average, for PDP plan enrollment), the growth rates were comparable between MA–PDs and PDPs between 2010 and 2013 (AAGR of 8.5 percent and 8.8 percent, respectively).

- The number of enrollees receiving the LIS grew modestly between 2007 and 2010 at 2.7 percent per year. Higher growth rates (3.1 percent) were observed between 2010 and 2013. The growth in the number of non-LIS enrollees declined between 2007 and 2010, but increased between 2010 and 2013. Faster enrollment growth among non-LIS enrollees is partly attributable to the recent growth in employer group waiver plans that shifted beneficiaries into Part D plans from employer plans that had previously received Medicare's retiree drug subsidy (RDS) (see Chart 10-3 for information on the RDS).

Chart 10-13. Part D enrollment by region, 2013

PDP region	State(s)	Percent of Medicare enrollment		Percent of Part D enrollment			
				Plan type		Subsidy status	
		Part D	RDS	PDP	MA–PD	LIS	Non-LIS
1	ME, NH	63%	7%	82%	18%	42%	58%
2	CT, MA, RI, VT	67	11	71	29	39	61
3	NY	74	7	57	43	38	62
4	NJ	69	7	80	20	27	73
5	DE, DC, MD	55	10	86	14	36	64
6	PA, WV	72	6	57	43	30	70
7	VA	59	5	77	23	32	68
8	NC	71	5	74	26	34	66
9	SC	61	11	69	31	38	62
10	GA	68	5	63	37	38	62
11	FL	71	6	51	49	32	68
12	AL, TN	71	4	64	36	39	61
13	MI	74	7	78	22	27	73
14	OH	75	5	67	33	27	73
15	IN, KY	71	5	75	25	33	67
16	WI	67	6	62	38	27	73
17	IL	63	13	86	14	34	66
18	MO	70	5	67	33	30	70
19	AR	66	5	75	25	41	59
20	MS	69	2	83	17	49	51
21	LA	70	6	64	36	42	58
22	TX	67	6	68	32	38	62
23	OK	65	3	78	22	34	66
24	KS	68	3	83	17	26	74
25	IA, MN, MT, NE, ND, SD, WY	70	4	74	26	25	75
26	NM	67	4	58	42	36	64
27	CO	64	9	50	50	27	73
28	AZ	68	6	48	52	28	72
29	NV	64	6	52	48	26	74
30	OR, WA	64	7	54	46	29	71
31	ID, UT	63	6	54	46	25	75
32	CA	75	5	51	49	36	64
33	HI	70	2	37	63	27	73
34	AK	41	24	98	2	57	43
	Mean	69	6	64	36	33	67
	Minimum	41	2	37	2	25	43
	Maximum	75	24	98	63	57	75

Note: PDP (prescription drug plan), RDS (retiree drug subsidy), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income subsidy). Definition of regions is based on PDP regions used in Part D.

Source: MedPAC analysis of Part D enrollment data from CMS.

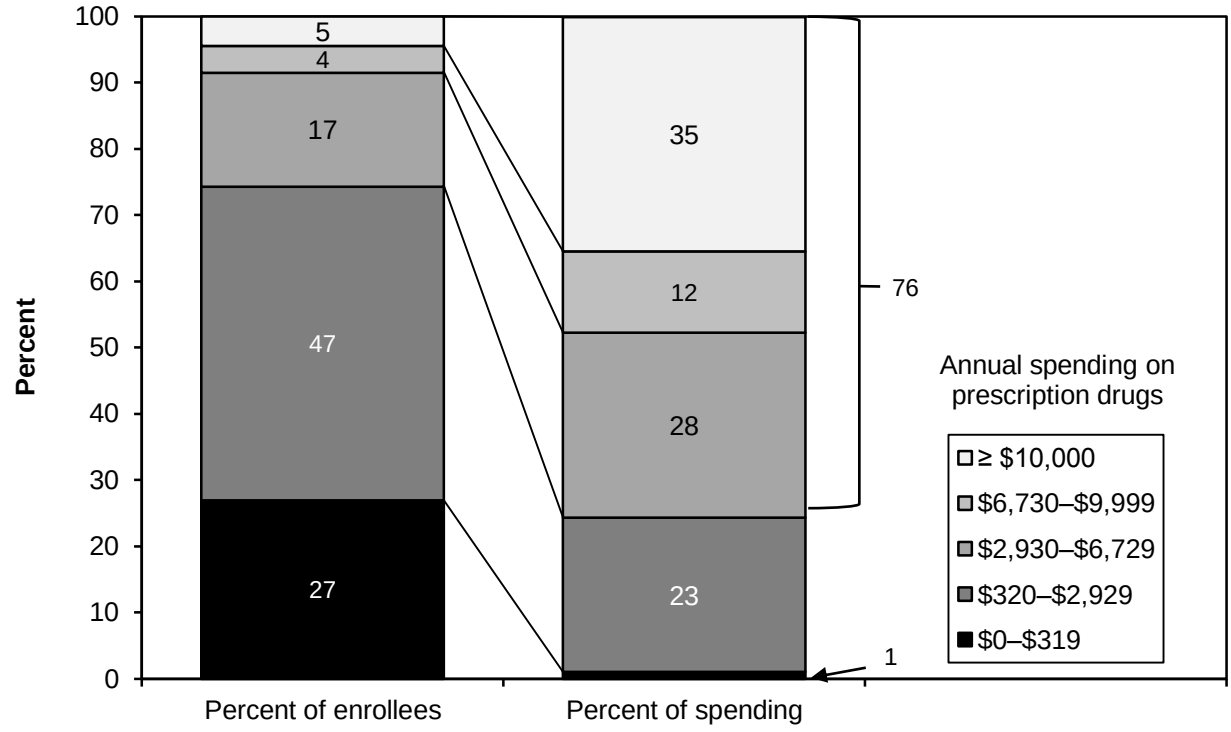
- Among Part D regions, in 2013, all but three regions (Region 5 (DE, DC, MD), Region 7 (VA), and Region 34 (AK)) had over 60 percent of all Medicare beneficiaries enrolled in Part D. Beneficiaries were less likely to enroll in Part D in regions where employer-sponsored drug coverage continues to be available. For example, in Region 34, the share of Medicare beneficiaries enrolled in Part D was 41 percent, while the share of beneficiaries enrolled in employer-sponsored plans that received the RDS was 24 percent. In other regions (Region 5 and Region 7), many beneficiaries likely received their drug coverage through the Federal Employees Health Benefits Program, which does not receive the RDS.

(Chart continued next page)

Chart 10-13. Part D enrollment by region, 2013 (continued)

- In 2013, all regions, with the exception of Region 34, experienced a decrease in the number of beneficiaries who received the RDS. The shift was likely motivated by changes made by Patient Protection and Affordable Care Act of 2010 that increased the generosity of Part D coverage and altered the tax treatment of drug expenses covered by the RDS.
- Wide variation was seen in the shares of Part D enrollees who enrolled in PDPs and MA–PD plans across PDP regions. The pattern of MA–PD enrollment is generally consistent with enrollment in Medicare Advantage plans.
- The share of Part D enrollees receiving the LIS ranged from 25 percent in Region 25 (IA, MN, MT, NE, ND, SD, and WY) and in Region 31 (ID and UT) to 57 percent in Region 34 (AK). In 20 of the 34 PDP regions, LIS enrollees accounted for 30 percent to 50 percent of enrollment. In one region (Region 34 (AK)), LIS enrollees accounted for more than half of Part D enrollment.

Chart 10-14. The majority of Part D spending is incurred by only one-quarter of all Part D enrollees, 2012



Note: "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Annual spending cuts used for this analysis generally correspond to the parameters of the defined standard benefit. In 2012, an individual not receiving Part D's low-income subsidy and without other sources of supplemental coverage would have reached the catastrophic phase of the benefit at $6,730.39 in total drug spending, assuming that expenses for brand-name drugs accounted for 86.3 percent of total drug spending in the coverage gap. Components may not sum to totals due to rounding.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- Medicare Part D spending is concentrated in a subset of beneficiaries. In 2012, 26 percent of Part D enrollees had annual spending of $2,930 or more, at which point enrollees were responsible for a higher proportion of the cost of the drug until their spending reached $6,730.39 under the defined standard benefit. These beneficiaries accounted for 76 percent of total Part D spending.

- The costliest 9 percent of beneficiaries, those with drug spending above the catastrophic threshold under the defined standard benefit, accounted for 47 percent of total Part D spending. Over 70 percent of beneficiaries with the highest spending received Part D's low-income subsidy (see Chart 10-15). Spending on prescription drugs is less concentrated than Medicare Part A and Part B spending. In 2010, the costliest 5 percent of beneficiaries accounted for 39 percent of annual Medicare fee-for-service (FFS) spending, and the costliest quartile accounted for 82 percent of Medicare FFS spending.

- In 2012, the share of spending accounted for by the costliest 5 percent of beneficiaries increased to 35 percent from 33 percent in 2011.

Chart 10-15. Characteristics of Part D enrollees, by spending levels, 2012

	Annual drug spending		
	<$2,930	$2,930–$6,729	≥$6,730
Sex			
Male	43%	39%	41%
Female	57	61	59
Race/ethnicity			
White, non-Hispanic	74	75	70
African American, non-Hispanic	11	11	14
Hispanic	10	10	10
Other	5	5	6
Age (years)			
<65	18	21	43
65–69	25	19	16
70–74	20	19	14
75–80	14	15	11
80+	23	26	17
LIS status*			
LIS	30	45	72
Non-LIS	70	55	28
Plan type**			
PDP	60	69	78
MA–PD	40	31	22

Note: LIS (low-income subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. A small number of beneficiaries were excluded from the analysis because of missing data. Percentages may not sum to 100 due to rounding.
*A beneficiary was assigned LIS status if that individual received Part D's LIS at some point during the year.
**If a beneficiary was enrolled in both a PDP and an MA–PD plan during the year, that individual was classified in the type of plan with the greater number of months of enrollment.

Source: MedPAC analysis of Medicare Part D prescription drug event data and Part D denominator file from CMS.

- In 2012, Part D enrollees with annual drug spending between $2,930 and $6,729 and those with spending at or above $6,730 were more likely to be female than enrollees with annual spending below $2,930 (61 percent and 59 percent, respectively, compared with 57 percent).
- Part D enrollees with annual spending at or above $6,730 were more likely to be non-White, disabled enrollees under age 65 receiving the LIS compared with those with annual spending below $2,930.
- Most Part D enrollees with spending at or above $6,730 were enrolled in stand-alone PDPs (78 percent) compared with MA–PD plans (22 percent). In contrast, beneficiaries with annual spending below $2,930 were more likely to be in MA–PDs compared with those with higher annual spending (40 percent compared with 22 percent). This finding reflects the fact that most LIS enrollees are more costly on average and are in PDPs.

Chart 10-16. Part D spending and use per enrollee, 2012

		Plan type		LIS status	
	Part D	PDP	MA–PD	LIS	Non-LIS
Total gross spending (billions) [a]	$89.8	$64.4	$25.4	$48.4	$41.4
Total number of prescriptions[b] (millions)	1,640	1,073	567	691	949
Average spending per prescription	$55	$60	$45	$70	$44
Per enrollee per month					
Total spending[a]	$235	$270	$178	$362	$167
Out-of-pocket spending[c]	33	34	31	7	47
Plan liability[d]	143	160	115	213	106
Low-income cost-sharing subsidy	50	65	25	143	N/A
Number of prescriptions[b]	4.3	4.5	4.0	5.2	3.8

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income subsidy), N/A (not applicable). "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file was used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status. Numbers may not sum to totals due to rounding.
[a] "Total gross spending" includes slightly over $2.7 million in manufacturer discounts for brand-name drugs filled by non-LIS enrollees during the coverage gap.
[b] Number of prescriptions is standardized to a 30-day supply.
[c] "Out-of-pocket (OOP) spending" includes all payments that count toward the annual OOP spending threshold.
[d] "Plan liability" includes plan payments for drugs covered by both basic and supplemental (enhanced) benefits.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- In 2012, gross spending on drugs for the Part D program totaled $89.8 billion, with about 72 percent ($64.4 billion) accounted for by Medicare beneficiaries enrolled in PDPs. Part D enrollees receiving the LIS accounted for about 54 percent ($48.4 billion) of the total. Manufacturer discounts for brand-name drugs filled by non-LIS enrollees while they were in the coverage gap accounted for about 3 percent of the total (or about 6 percent of the gross spending by non-LIS enrollees).

- The number of prescriptions filled by Part D enrollees totaled 1.64 billion, with about two-thirds (1,073 million) accounted for by PDP enrollees. The 36 percent of enrollees who received the LIS accounted for about 42 percent (691 million) of the total number of prescriptions filled.

- Part D enrollees filled 4.3 prescriptions at $235 per month on average, a decrease from $239 per month in 2011 for roughly the same number of prescriptions filled, on average. PDP enrollees had higher average monthly spending and more prescriptions filled compared with MA–PD plan enrollees. The average monthly plan liability for MA–PD enrollees ($115) was considerably lower than that of PDP enrollees ($160), while average monthly OOP spending was similar for enrollees in both types of plans ($31 vs. $34, respectively). The average monthly low-income cost-sharing subsidy was much lower for MA–PD enrollees ($25) compared with PDP enrollees ($65).

- Average monthly spending per enrollee for an LIS enrollee ($362) was more than double that of a non-LIS enrollee ($167), while the average number of prescriptions filled per month by an LIS enrollee was 5.2 compared with 3.8 for a non-LIS enrollee. LIS enrollees had much lower OOP spending, on average, than non-LIS enrollees ($7 vs. $47). Part D's LIS pays for most of the cost sharing for LIS enrollees, averaging $143 per month in 2012.

Chart 10-17. Trends in Part D spending and use per enrollee, 2007–2012

	Average spending / use						Average annual growth rate, 2007–2012	
	2007	2008	2009	2010	2011	2012	Number	Percent
Average spending								
All Part D	$212	221	228	231	239	235	$5	2.1%
By LIS status								
LIS	$301	324	339	348	364	362	$12	3.8
Non-LIS	$156	159	163	163	167	167	$2	1.4
By plan type								
PDP	$239	250	260	265	274	270	$6	2.5
MA−PD	$151	162	169	172	178	178	$5	3.3
Average number of prescriptions*								
All Part D	3.9	4.1	4.1	4.2	4.3	4.3	0.1	1.9%
By LIS status								
LIS	4.6	4.9	5.0	5.1	5.1	5.2	0.1	2.4
Non-LIS	3.4	3.6	3.6	3.7	3.8	3.8	0.1	2.4
By plan type								
PDP	4.1	4.3	4.4	4.4	4.5	4.5	0.1	1.7
MA−PD	3.4	3.6	3.7	3.8	3.9	4.0	0.1	2.9

Note: LIS (low-income subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file was used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status. Numbers may not sum to totals due to rounding.
* Number of prescriptions is standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- Between 2007 and 2012, the average per capita spending for Part D–covered drugs grew at an average annual rate of 2.1 percent, or by about 11 percent cumulatively. Growth in average per capita spending has fluctuated over the years, ranging from a negative 1.5 percent growth between 2011 and 2012, to a growth of over 4 percent during the first few years of the program.

- Spending for non-LIS enrollees remained relatively flat compared with LIS enrollees (average annual growth rate of 1.4 percent compared with 3.8 percent) during the 2007 to 2012 period, resulting in a larger difference in per capita spending between the two groups—from $145 in 2007 to nearly $200 per member per month in 2012. The growth in the number of prescriptions filled by LIS and non-LIS enrollees was comparable during this period.

- The growth in per capita drug spending among MA−PD enrollees exceeded that of PDP enrollees during the 2007 to 2012 period (3.3 percent compared with 2.5 percent), but the average growth was lower for MA−PD enrollees in terms of the dollar increase ($5 compared with $6), and the average per capita spending for MA−PD enrollees continued to be below that of PDP enrollees by about $90.

Chart 10-18. Top 15 therapeutic classes of drugs covered under Part D, by spending and volume, 2012

Top 15 therapeutic classes by spending	Dollars		Top 15 therapeutic classes by volume	Prescriptions	
	Billions	Percent		Millions	Percent
Diabetic therapy	$8.7	9.7%	Antihypertensive therapy agents	171.4	10.5%
Antihyperlipidemics	7.5	8.4	Antihyperlipidemics	163.8	10.0
Asthma/COPD therapy agents	6.8	7.5	Beta adrenergic blockers	104.4	6.4
Antipsychotics	6.3	7.0	Diabetic therapy	102.6	6.3
Antihypertensive therapy agents	5.3	5.9	Antidepressants	93.1	5.7
Antivirals	4.0	4.4	Diuretics	85.8	5.2
Peptic ulcer therapy	3.7	4.1	Peptic ulcer therapy	83.9	5.1
Antidepressants	3.4	3.8	Analgesics (narcotic)	76.1	4.6
Analgesics (narcotic)	3.2	3.5	Calcium channel blockers	71.4	4.4
Platelet aggregation inhibitors	2.6	2.9	Thyroid therapy	60.2	3.7
Analgesic (anti-inflammatory/ antipyretic, non-narcotic)	2.6	2.9	Anticonvulsant	48.2	2.9
Anticonvulsant	2.5	2.8	Antibacterial agents	45.0	2.7
Cognitive disorder therapy (antidementia)	2.2	2.5	Asthma/COPD therapy agents	44.6	2.7
Calcium and bone metabolism regulators	1.7	1.9	Analgesic (anti-inflammatory/ antipyretic, non-narcotic)	30.8	1.9
Antineoplastic enzyme inhibitors	1.7	1.9	Anticoagulants	27.1	1.6
Subtotal, top 15 classes	62.2	69.2	Subtotal, top 15 classes	1,208.3	73.7
Total, all classes	89.8	100.0	Total, all classes	1,639.9	100.0

Note: COPD (chronic obstructive pulmonary disease). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. "Volume" is the number of prescriptions, standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. Numbers may not sum to totals due to rounding.

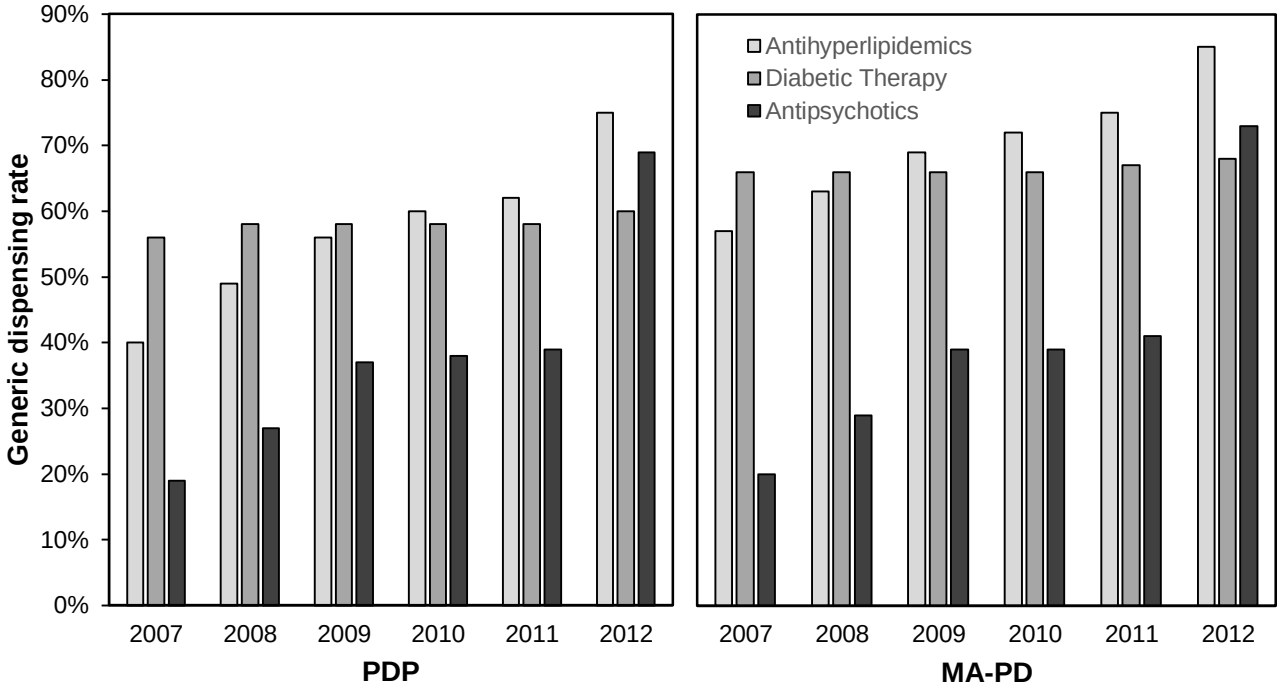
Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- The list of the top 15 therapeutic classes has been stable since 2007, with the majority of therapeutic classes appearing on the list in every year. In 2012, spending on prescription drugs covered by Part D plans totaled $89.8 billion. The top 15 therapeutic classes by spending accounted for about 69 percent of the total. Over 1.6 billion prescriptions were dispensed in 2012, with the top 15 therapeutic classes by volume accounting for nearly 74 percent of the total.

- In 2012, spending on drugs to treat diabetes totaled $8.7 billion, exceeding spending on drugs to treat high cholesterol (antihyperlipidemics) and psychiatric conditions (antipsychotics) for the first time since 2007. Spending on antipsychotics declined by $1.3 billion between 2011 and 2012.

- Nine therapeutic classes are among the top 15, based on both spending and volume. Central nervous system agents (antipsychotics, anticonvulsants, and antidepressants) and cardiovascular agents (antihyperlipidemics and antihypertensive therapy agents) dominate the list by spending, each accounting for about one-fifth of spending, while cardiovascular agents (antihyperlipidemics, antihypertensive therapy agents, beta-adrenergic blockers, calcium channel blockers, and diuretics) dominate the list by volume, accounting for about 50 percent of the prescriptions in the top 15 therapeutic classes.

Chart 10-19. Generic dispensing rate for selected therapeutic classes, by plan type, 2007–2012



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Prescriptions are standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. "Generic dispensing rate" is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event records are classified as PDP or MA–PD records based on the contract identification on each record.

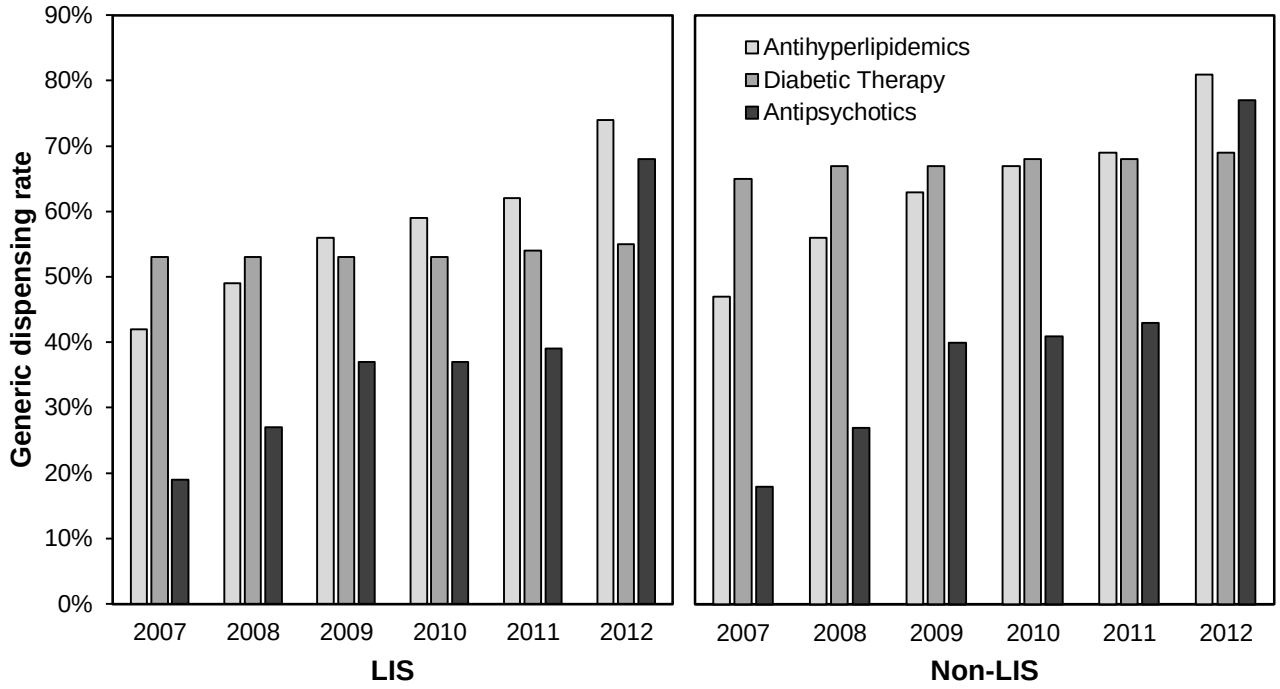
Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- The share of prescriptions that are for generic drugs (generic dispensing rate, or GDR) has increased steadily over the years, from 61 percent in 2007 to 81 percent in 2012 across all therapeutic classes (data not shown).

- The GDR in a given class depends, in large part, on the availability of generic drugs in the class. For example, the GDR for antipsychotics was among the lowest within the top 15 therapeutic classes until some of the key drugs came off patent and generic versions became available in 2011 and 2012. Other factors, such as prescribing behavior and patients' medication needs and/or preferences can also affect the GDR.

- Between 2007 and 2012, GDRs for PDP enrollees were generally lower than those of MA–PD enrollees for most of the top 15 therapeutic classes. For example, GDRs for diabetic therapy among the MA–PD enrollees exceeded that of PDP enrollees by between 8 percentage points and 10 percentage points during this period. The difference in GDRs for antihyperlipidemics between MA–PD enrollees and PDP enrollees decreased during this period (from 17 percentage points in 2007 to about 10 percentage points in 2012), but antihyperlipidemics are still one of the classes with the largest difference in GDRs between PDPs and MA–PDs. Some of the difference in GDRs reflects the fact that, relative to MA–PDs, PDPs have a higher proportion of LIS enrollees, who are less likely to take a generic medication in a given therapeutic class (see Chart 10-20).

Chart 10-20. Generic dispensing rate for selected therapeutic classes, by LIS status, 2012



Note: LIS (low-income subsidy). Prescriptions are standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. "Generic dispensing rate" is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event (PDE) records are classified as LIS or non-LIS records based on monthly LIS eligibility information in Part D's denominator file. Estimates are sensitive to the method used to classify PDE records as LIS or non-LIS.

Source: MedPAC analysis of Medicare Part D prescription drug event data and Part D denominator file from CMS.

- Between 2007 and 2012, the share of prescriptions that are for generic drugs (generic dispensing rate, or GDR) have increased for both LIS and non-LIS enrollees. However, LIS enrollees have had a consistently lower GDR than non-LIS enrollees, and the difference has grown from 2 percentage points in 2007 to 5 percentage points in 2012 (data not shown).

- The difference in GDRs for antihyperlipidemics between LIS and non-LIS enrollees remained stable at around 7 percentage points to 8 percentage points for most of the years between 2007 to 2012, which is in contrast to the large differences observed between PDP and MA−PD enrollees, which ranged from 10 percentage points to 17 percentage points during this period (see Chart 10-19). These trends suggest that the narrowing of the gap in GDRs between PDPs and MA−PDs is likely attributable to the increase in the use of generic antihyperlipidemics by non-LIS enrollees in PDPs.

- Other notable differences in GDRs between LIS and non-LIS enrollees include a large and persistent difference of around 14 percentage points to 15 percentage points for diabetic therapy and a 9 percentage point difference in GDRs observed in 2012 for antipsychotics (compared with a difference of less than 4 percentage points before 2012) after generic versions became available for some of the key drugs in the class. Multiple factors likely contribute to the difference in GDRs.

Chart 10-21. Drug spending and use, and characteristics of beneficiaries filling the most prescriptions, 2012

	Beneficiaries in the top 5 percent[a]		
		As a percent of Part D	All Part D
Number of beneficiaries (in millions)	1.6	5%	33.8
Aggregate spending and use			
Gross spending (in billions)	$17.4	19	$89.8
Number of prescriptions[b] (in millions)	229	19	1,217
Average spending per prescription	$76		$74
Per enrollee per year			
Gross spending	$10,923		$2,824
Out-of-pocket spending[c]	$490		$392
Number of prescriptions[b]	144		38
Demographic characteristics			
Percent female	66%		58%
Percent White	71		74
Percent LIS	79		36
Percent PDP	77		63

Note: LIS (low-income subsidy), PDP (prescription drug plan). "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies.
[a] Top 5 percent is based on volume of prescriptions filled among those who filled at least one prescription in 2012. Because roughly 7 percent of Part D enrollees did not fill any prescriptions for a Part D–covered drug in 2012, the "top 5 percent" translates to about 4.7 percent of all Part D enrollees. The figures reported in the table include claims for slightly over 600 beneficiaries who did not have a record of Part D enrollment in the denominator file and claims that were missing beneficiary identification information. These claims accounted or over 88,000 prescriptions at a gross cost of about $6 million.
[b] "Number of prescriptions" are based on counts of prescription drug events (PDEs) (not standardized to a 30-day supply).
[c] "Out-of-pocket (OOP) spending" includes all payments that count toward the annual OOP spending threshold.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- In 2012, Part D enrollees in the top 5 percent (1.6 million), based on the number of prescriptions filled, accounted for $17.4 billion in gross spending (19 percent of total gross spending) for drugs covered under the Part D program. The number of prescriptions filled by enrollees in the top 5 percent totaled 229 million, or 19 percent of all prescriptions filled under the Part D program.

- In 2012, Part D enrollees in the top 5 percent each filled a total of 144 prescriptions at a gross cost of $10,923, on average, compared with an average of 38 prescriptions each at a gross cost of $2,824 for all Part D enrollees. Compared with the difference in gross spending and the number of prescriptions filled, the difference in beneficiary out-of-pocket spending between enrollees in the top 5 percent and all Part D enrollees was much smaller ($490 compared with $392).

- Compared with the overall Part D population, enrollees in the top 5 percent were more likely to be female and non-White. Nearly 80 percent of the enrollees in the top 5 percent received the low-income subsidy compared with 36 percent for all Part D enrollees, and 77 percent were enrolled in a stand-alone prescription drug plan compared with 63 percent for all Part D enrollees.

Chart 10-22. Part D spending and use, 2013

	Part D	Plan type	
		PDP	MA–PD
Total gross spending (billions)	$103.6	$72.3	$28.6
Total number of prescriptions* (millions)	1,368	900	440
Average cost per prescription	$76	$80	$65
Total gross spending by specialty			
Primary care providers**	$60.3	$41.5	$17.5
Specialty and other providers	$43.3	$30.8	$11.2
Total number of prescriptions* by specialty			
Primary care providers**	974.0	639.4	319.8
Specialty and other providers	394.2	260.7	119.8
Average cost per prescription			
Primary care providers**	$61.95	$64.96	$54.58
Specialty and other providers	$109.79	$117.97	$93.20

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. Numbers may not sum to totals due to rounding.
* "Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable with the 2012 prescription counts shown in Chart 10-16 through Chart 10-21.
** The definition of "primary care" used here is based on that used for the Primary Care Incentive Payment Program and includes practitioners who have a primary Medicare specialty designation of family practice, internal medicine, pediatrics, geriatrics, nurse practitioner and clinical nurse specialist, or physician assistant.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- In 2013, gross spending on drugs for the Part D program totaled $103.6 billion, with about 70 percent ($72.3 billion) accounted for by Medicare beneficiaries enrolled in PDPs. The number of prescriptions filled by Part D enrollees totaled about 1.37 billion, with about two-thirds (900 million) accounted for by PDP enrollees. The cost per prescription dispensed averaged $76 across all Part D enrollees. The average cost per prescription is lower among MA–PD enrollees ($65) compared with that of PDP enrollees ($80).

- Prescriptions written by primary care providers accounted for about 58 percent ($60.3 billion) of the gross spending and 71 percent (974 million) of prescriptions dispensed under the Part D program. The share of spending and prescriptions written by primary care providers were higher in MA–PDs (about 61 percent of gross spending and about 73 percent of prescriptions) than in PDPs (about 57 percent of gross spending and about 71 percent of prescriptions).

- The average cost per prescription dispensed was lower among primary care providers (about $62) compared with specialty and other providers (about $110). The cost per prescription dispensed for MA–PD enrollees was lower than that of PDP enrollees regardless of the provider type (primary care vs. specialty and others).

Chart 10-23. Part D patterns of prescribing by provider type, 2013

		Provider type	
	Part D	Primary care*	Specialty/others
Number of individual prescribers (thousands)	1,043	420	623
Percent of all individual prescribers		40%	60%
Average beneficiary (patient) count	143	184	115
Average per beneficiary			
Gross spending	$592	$690	$523
Number of prescriptions**	6.7	9.8	4.5
Prescribers in the top 1 percent based on number of prescriptions filled per beneficiary			
Number of individual prescribers	9,054	7,490	1,564
Percent of all individual prescribers		83%	17%
Total gross spending (billions)	$8.0	$6.8	$1.2
Percent of total gross spending	8%	11%	3%
Total number of prescriptions** (millions)	131	115	16
Percent of total gross spending	10%	12%	4%
Average per beneficiary			
Gross spending	$3,344	$3,049	$4,753
Number of prescriptions**	44	44	45

Note: "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Numbers may not sum to totals due to rounding.
* The definition of "primary care" used here is based on that used for the Primary Care Incentive Payment Program and includes practitioners who have a primary Medicare specialty designation of family practice, internal medicine, pediatrics, geriatrics, nurse practitioner and clinical nurse specialist, and physician assistant.
** "Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable to the 2012 prescription counts shown in Chart 10-16 through Chart 10-21.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- In 2013, about 1 million individual providers wrote prescriptions for Medicare beneficiaries that were filled under Part D. Of those, about 40 percent were primary-care providers and 60 percent were specialty or other types of providers.
- The average count of (Medicare only) beneficiaries (patients) was higher among primary-care providers compared with specialty and other types of providers—184 beneficiaries versus 115.

(Chart continued next page)

Chart 10-23. Part D patterns of prescribing by provider type, 2013 (continued)

- On a per beneficiary basis, average gross spending for Part D prescriptions was higher for prescriptions written by primary-care providers ($690) compared with the average for specialty and other providers ($523). Primary-care providers also wrote more prescriptions per beneficiary, on average, than specialty and other providers: 9.8 compared with 4.5.

- More than 9,000 prescribers were among the top 1 percent of all prescribers, as ranked by the average number of Part D prescriptions filled per beneficiary in 2013. Of those prescribers, 83 percent were primary-care providers and 17 percent were specialty and other providers.

- The top 1 percent of prescribers accounted for 8 percent of total gross spending and 10 percent of all prescriptions filled. Among primary-care prescribers, results were more concentrated: the top 1 percent of prescribers accounted for 11 percent of gross spending and 12 percent of all prescriptions.

- Among the prescriptions that were written by prescribers ranked among the top 1 percent of all prescribers in 2013, per beneficiary Part D spending averaged more than $3,000 for a total of 44 to 45 prescriptions filled.

Chart 10-24. Part D patterns of prescribing for selected specialties, 2013

	Number of individual Part D prescribers (thousands)	Share of all Part D prescribers (percent)	Average per beneficiary	
			Gross spending (in dollars)	Number of prescriptions
All Part D	1,042.6	100%	$592	6.7
All specialty/others	622.6	60	523	4.5
Selected specialties:				
Cardiology	22.7	4	597	9.3
Psychiatry	25.9	4	1,417	13.4
Neurology	13.1	2	2,213	7.9
Nephrology	7.9	1	1,315	10.0
Infectious disease	4.9	1	4,515	10.1
Endocrinology	5.3	1	1,460	8.9

Note: "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. "Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable with the 2012 prescription counts shown in Chart 10-16 through Chart 10-21.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- Cardiologists and psychiatrists were among the most numerous types of specialty-care prescribers, each making up 4 percent of all individual Part D prescribers in 2013. An additional 2 percent of all Part D prescribers had a neurology specialty.
- Cardiologists wrote an average of 9.3 prescriptions per beneficiary for a combined $597 in average gross spending. That average number of prescriptions is considerably higher than the overall Part D average of 6.7 per beneficiary. However, average gross spending per beneficiary was about the same for cardiologists as for all Part D prescribers: $597 compared with $592, which reflects the widespread availability of generic cardiology medications.
- By comparison, other specialties had much higher Part D gross spending per beneficiary. Infectious disease specialists had the highest spending per beneficiary at $4,515, followed by neurologists at $2,213. Psychiatrists had the highest average number of prescriptions filled per beneficiary, at 13.4 compared with the overall average of 6.7.

SECTION 11

Other services

Dialysis
Hospice
Clinical laboratory

Chart 11-1. Number of dialysis facilities is growing, and share of for-profit and freestanding dialysis providers is increasing

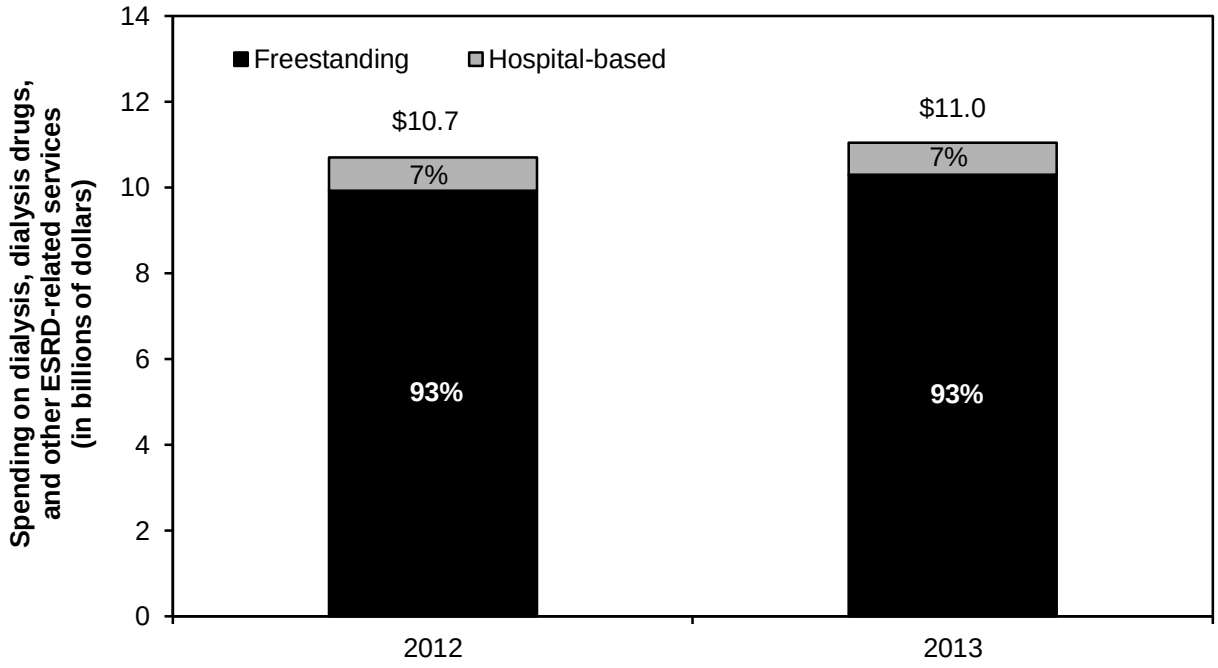
	2014	Average annual percent change 2009–2014	Average annual percent change 2013–2014
Total number of:			
Dialysis facilities	6,298	3%	5%
Hemodialysis stations	110,676	3	4
Mean number of hemodialysis stations per facility	18	0.1	–0.8
	Percent of total		
Hospital-based	7%	–5	–5
Freestanding	93	4	6
Urban	80	4	5
Rural, micropolitan	13	1	3
Rural, adjacent to urban	5	2	0
Rural, not adjacent to urban	3	2	3
Frontier	1	0.5	6
For profit	87	4	6
Nonprofit	13	–3	–2

Note: "Nonprofit" includes facilities designated as either nonprofit or government. "Average annual percent change" is based on comparing 2009, 2013, and 2014 end-of-year files.

Source: Compiled by MedPAC from the 2009, 2013, and 2014 CMS Dialysis Compare end-of-year files.

- Between 2009 and 2014, the number of freestanding and for-profit facilities increased, while hospital-based and nonprofit facilities decreased. Freestanding facilities increased from 89 percent to 93 percent of all facilities, and for-profit facilities increased from 82 percent to 87 percent of all facilities.
- Between 2009 and 2014, the proportion of facilities located in rural areas has remained relatively constant.
- Since 2009, the number of facilities has increased 3 percent per year. The average size of a facility has remained relatively constant, averaging about 18 dialysis treatment stations per facility (17.4 stations in 2009, 17.7 stations in 2013, and 17.6 stations in 2014).

Chart 11-2. Medicare spending for outpatient dialysis services furnished by freestanding and hospital-based dialysis facilities, 2012 and 2013



Note: ESRD (end-stage renal disease).

Source: Compiled by MedPAC from the 2012 and 2013 institutional outpatient files from CMS.

- In 2013, total spending for dialysis, dialysis drugs, and ESRD-related clinical laboratory tests was $11.0 billion. In 2013, Medicare paid nearly all facilities under a modernized prospective payment system that includes in the payment bundle certain dialysis drugs and ESRD-related clinical laboratory tests that were separately paid before 2011.
- Between 2012 and 2013, total ESRD expenditures increased by about 3 percent.
- Freestanding dialysis facilities treat most dialysis beneficiaries and accounted for 93 percent of expenditures in 2012 and 2013.

Chart 11-3. The ESRD population is growing, and most ESRD patients undergo dialysis

	2002		2008		2012	
	Patients (thousands)	Percent	Patients (thousands)	Percent	Patients (thousands)	Percent
Total	431.0	100%	548.9	100%	636.9	100%
Dialysis	313.0	73	388.6	71	450.6	71
In-center hemodialysis	282.2	65	353.2	64	400.8	63
Home hemodialysis*	1.6	0.4	4.5	0.8	7.9	1.2
Peritoneal dialysis*	28.4	7	29.7	5	40.7	6
Unknown	0.8	0.2	1.2	0.2	1.2	0.2
Functioning graft and kidney transplants	118.1	27	160.2	29	186.3	29

Note: ESRD (end-stage renal disease). Totals may not equal sum of components due to rounding. Data include both Medicare and non-Medicare patients.
* Home dialysis methods.

Source: Compiled by MedPAC from the United States Renal Data System.

- Persons with ESRD require either dialysis or a kidney transplant to maintain life. The total number of ESRD patients increased by 4 percent annually between 2002 and 2012.
- In hemodialysis, a patient's blood flows through a machine with a special filter that removes wastes and extra fluids. In peritoneal dialysis, the patient's blood is cleaned by using the lining of his or her abdomen as a filter. Peritoneal dialysis is the most common form of home dialysis.
- Most ESRD patients undergo hemodialysis administered in a dialysis facility three times a week. Between 2002 and 2012, the total number of in-center hemodialysis patients and peritoneal dialysis patients each increased by 4 percent annually. Although a smaller proportion of all dialysis patients undergo home hemodialysis, the number of these patients grew 18 percent per year during this time period.
- Functioning graft patients are patients who have had a successful kidney transplant. Patients undergoing kidney transplant may receive either a living kidney or a cadaveric kidney donation. In 2012, 32 percent of transplanted kidneys were from living donors and the remainder were from cadaver donors.

Chart 11-4. Asian Americans and Hispanics are among the fastest growing segments of the ESRD population

	Percent of total in 2012	Average annual percent change 2007–2012
Total (*n* = 636,905)	100%	4%
Age (years)		
0–19	1	–0.2
20–44	16	1
45–64	44	4
65–79	30	5
80+	9	5
Sex		
Male	57	4
Female	43	3
Race/ethnicity		
White	60	4
African American	32	4
Native American	1	3
Asian American	6	7
Hispanic	17	6
Non-Hispanic	83	3
Underlying cause of ESRD		
Diabetes	38	4
Hypertension	25	4
Glomerulonephritis	17	2
Other causes	21	4

Note: ESRD (end-stage renal disease). Totals may not equal sum of the components due to rounding. ESRD patients include those who undergo maintenance dialysis and those who have a functioning kidney transplant.

Source: Compiled by MedPAC from the United States Renal Data System.

- Among ESRD patients, 39 percent are over age 65. About 60 percent are White.
- Diabetes is the most common cause of renal failure.
- The number of ESRD patients increased by 4 percent annually between 2007 and 2012. Among the fastest growing groups of patients are Asian Americans and Hispanics.

Chart 11-5. Characteristics of Medicare fee-for-service dialysis patients, 2013

	Percent of all FFS dialysis patients
Age (years)	
Under 45	12%
45–64	38
65–74	26
75–84	18
85+	7
Sex	
Male	55
Female	45
Race	
White	49
African American	36
All other	15
Residence	
Urban county	82
Rural county, micropolitan	11
Rural county, adjacent to urban	5
Rural county, not adjacent to urban	3
Frontier county	1
Prescription drug coverage status	
Enrolled in Part D plan or other source of creditable drug coverage	85
LIS	58
Dually eligible for Medicare and Medicaid	48

Note: FFS (fee-for-service), LIS (low-income [drug] subsidy). Urban counties contain a core area with 50,000 or more people, rural micropolitan counties contain at least one cluster of at least 10,000 and less than 50,000 people, rural counties adjacent to urban areas do not have a city of 10,000 people in the county, and rural counties not adjacent to urban areas do not have a city of 10,000 people. Frontier counties are counties with six or fewer people per square mile. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of dialysis claims files and denominator files from CMS.

- Compared with all Medicare patients, FFS dialysis patients are disproportionately younger and African American.
- In 2013, nearly 20 percent of FFS dialysis patients resided in a rural county.
- Nearly half of all dialysis patients were dually eligible for Medicare and Medicaid services.
- About 85 percent of FFS dialysis patients were enrolled in Part D plans or had other sources of creditable drug coverage.

Chart 11-6. Aggregate margins vary by type of freestanding dialysis facility, 2013

Type of facility	Percentage of freestanding facilities	Aggregate margin
All facilities	100%	4.3%
Urban	80	4.9
Rural	20	0.6
LDOs	77	4.1
Non-LDOs	23	5.2
Treatment volume (quintile)		
Lowest	20	–12.3
Second	20	–3.8
Third	20	2.0
Fourth	20	6.0
Highest	20	9.7

Note: LDO (large dialysis organization). Margins include payments and costs for composite rate services, injectable drugs, and other end-stage renal disease–related services.

Source: Compiled by MedPAC from 2013 cost reports and the 2013 institutional outpatient file from CMS.

- For 2013, the aggregate Medicare margin for composite rate services and injectable drugs was 4.3 percent.
- Generally, freestanding dialysis facilities' margins vary by the size of the facility; facilities with greater treatment volume have higher margins on average. Differences in capacity and treatment volume explain some of the differences observed between the margins of urban and rural facilities. Urban facilities are larger on average than rural facilities with respect to the number of dialysis treatment stations and Medicare treatments provided. Some rural facilities have benefited from the low-volume adjustment that is included in the new end-stage renal disease payment method that began in 2011.

Chart 11-7. Medicare hospice spending and average length of stay were virtually unchanged in 2013

	2000	2012	2013	Average annual change, 2000–2012	Change, 2012–2013
Beneficiaries in hospice (in millions)	0.534	1.274	1.315	7.5%	3.2%
Medicare payments (in billions)	$2.9	$15.1	$15.1	14.7%	–0.1%
Average length of stay among decedents (in days)	53.5	88.0	87.8	4.2%	–0.2%
Median length of stay among decedents (in days)	17	18	17	+1 day*	–1 day

Note: Average length of stay is calculated for decedents who used hospice at the time of death or before death and reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his/her lifetime. Due to rounding, the percent change displayed in the chart may not equal the percent change calculated using the yearly data displayed in the chart.
* This figure reflects the raw change between 2000 and 2013, rather than the percent change.

Source: MedPAC analysis of the denominator file, the Medicare Beneficiary Database, and the 100 percent hospice claims standard analytic file from CMS.

- The number of Medicare beneficiaries receiving hospice services more than doubled between 2000 and 2012 and continued to grow in 2013, suggesting that access to hospice care has increased.
- Average length of stay held steady at about 88 days between 2012 and 2013, after a long period of growth.
- Total Medicare payments to hospices were about $15.1 billion in 2013, about the same as 2012. The flat spending between 2012 and 2013 partly reflects the effect of the sequester, which reduced Medicare payments by 2 percent beginning April 1, 2013.

Chart 11-8. Hospice use increased across beneficiary groups from 2000 to 2013

	Share of decedents using hospice			Average annual percentage point change	Percentage point change
	2000	2012	2013	2000–2012	2012–2013
All	22.9%	46.7%	47.3%	2.0%	0.6%
FFS beneficiaries	21.5	45.7	46.2	2.0	0.5
MA beneficiaries	30.9	50.4	50.6	1.6	0.2
Dual eligibles	17.5	41.6	42.1	2.0	0.5
Non–dual eligibles	24.5	48.4	48.9	2.0	0.5
Age (years)					
<65	17.0	29.2	29.2	1.0	0.0
65–84	24.7	45.0	45.3	1.7	0.3
85+	21.4	54.0	55.0	2.7	1.0
Race/ethnicity					
White	23.8	48.6	49.2	2.1	0.6
Minority	17.3	36.5	37.0	1.6	0.5
Gender					
Male	22.4	42.8	43.3	1.7	0.5
Female	23.3	50.2	50.9	2.2	0.7
Beneficiary location					
Urban	24.3	48.0	48.5	2.0	0.5
Micropolitan	18.5	43.4	44.3	2.1	0.9
Rural, adjacent to urban	17.6	42.2	42.9	2.1	0.7
Rural, nonadjacent to urban	15.8	37.7	38.0	1.8	0.3
Frontier	13.2	31.9	32.2	1.6	0.3

Note: FFS (fee-for-service), MA (Medicare Advantage). "Beneficiary location" refers to the beneficiary's county of residence. Urban, micropolitan, and rural designations are based on the urban influence codes. The frontier category is defined as population density equal to or less than six persons per square mile.

Source: MedPAC analysis of data from the denominator file and the Medicare Beneficiary Database from CMS.

- Hospice use grew in almost all beneficiary groups in 2013, continuing the trend of a growing proportion of beneficiaries using hospice at the end of life.
- Despite this growth, hospice use continued to vary by demographic and beneficiary characteristics. Medicare decedents who were older, White, female, MA enrollees, not dual eligible, or living in an urban area were more likely to use hospice than their counterparts.

Chart 11-9. Number of Medicare-participating hospices has increased due to growth in for-profit hospices

	2000	2011	2012	2013
All hospices	2,255	3,585	3,727	3,925
For profit	672	2,054	2,199	2,411
Nonprofit	1,324	1,314	1,318	1,314
Government	257	217	209	200
Freestanding	1,069	2,491	2,643	2,844
Hospital based	785	587	568	553
Home health based	378	486	492	503
SNF based	22	21	23	25
Urban	1,424	2,536	2,670	2,824
Rural	788	986	983	978

Note: SNF (skilled nursing facility). Numbers may not sum to totals because of missing data for a small number of providers.

Source: MedPAC analysis of Medicare cost reports, Provider of Services file, and the standard analytic file of hospice claims from CMS.

- There were more than 3,900 Medicare-participating hospices in 2013. Most of them were for-profit hospices.
- Between 2000 and 2013, the number of Medicare-participating hospices grew by nearly 1,700 providers. For-profit hospices accounted almost entirely for that growth.
- Growth in the number of providers has occurred predominantly among freestanding and home health–based providers. The number of hospital-based providers has declined.
- The number of hospices in rural and urban areas was substantially higher in 2013 than in 2000, although the number of hospices in rural areas declined modestly in the past few years. The share of hospices located in rural areas (26 percent) and urban areas (74 percent) is similar to the share of Medicare beneficiaries residing in these two types of areas.

Chart 11-10. Hospice cases and length of stay, by diagnosis, 2013

Diagnosis	Share of total cases	Percent of cases with length of stay greater than 180 days
Cancer (except lung cancer)	21%	10%
Circulatory, except heart failure	13	22
Heart failure	9	22
Alzheimer's and similar diseases	8	38
Lung cancer	8	9
Organic psychoses	6	32
Chronic airway obstruction, NOS	6	28
Dementia	6	35
Debility, NOS	5	26
Respiratory disease	4	13
Adult failure to thrive	4	25
Nervous system, except Alzheimer's	3	33
Genitourinary disease	3	7
Other	2	12
Digestive disease	2	9
All	100	21

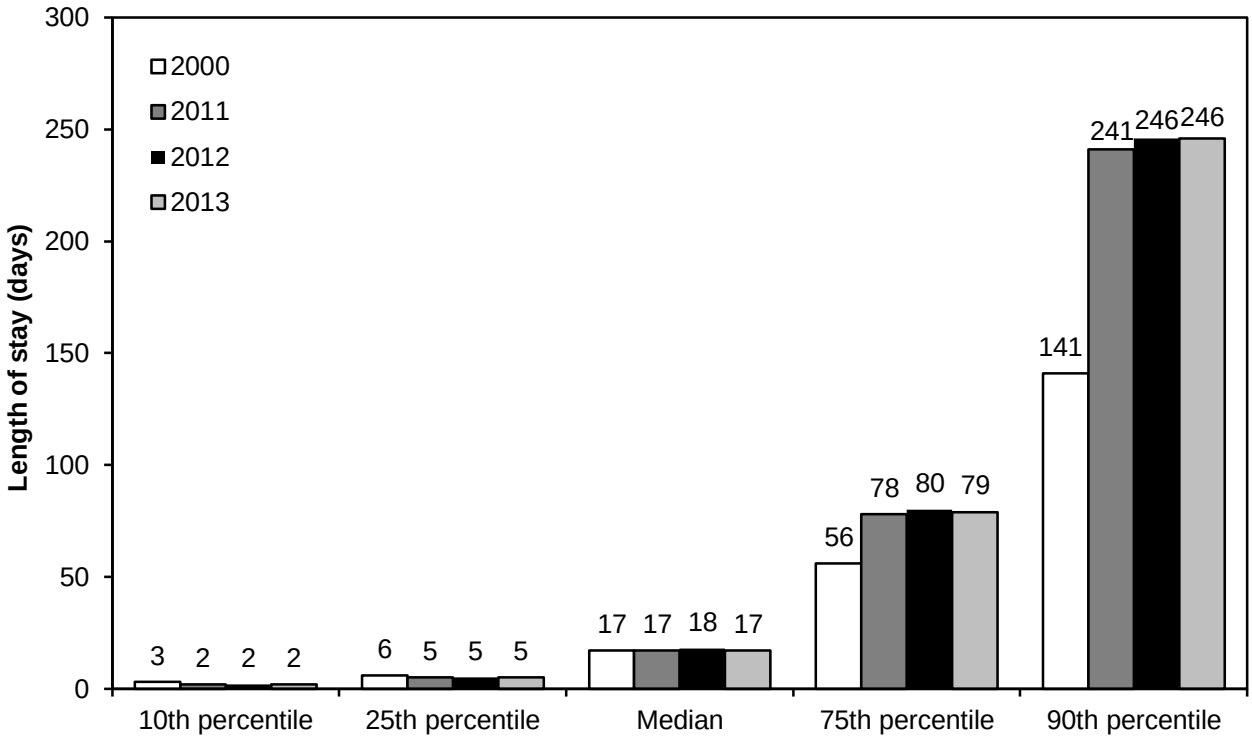
Note: NOS (not otherwise specified). Cases include all patients who received hospice care in 2013, not just decedents. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file from CMS and the Medicare Beneficiary Database.

- In 2013, the most common terminal diagnosis among Medicare hospice patients was cancer (all types), accounting for about 29 percent of cases. The next most common diagnoses were Alzheimer's disease, dementia, organic psychoses, and other neurological conditions (23 percent of cases), and heart failure and other circulatory conditions (22 percent of cases).

- Length of stay varies by diagnosis. Nearly one-quarter or more of hospice patients in 2013 with Alzheimer's disease, dementia, nervous system disorders, organic psychoses, chronic airway obstruction, debility, and adult failure to thrive had lengths of stay exceeding 180 days. Long hospice stays were least common among beneficiaries with genitourinary disease, digestive disease, and cancer.

Chart 11-11. Hospice length of stay changed little in 2013, after a more than decade-long period of growth in the longest stays



Note: Data reflect hospice length of stay for Medicare decedents who used hospice at the time of death or before death. "Length of stay" reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime.

Source: MedPAC analysis of the denominator file and the Medicare Beneficiary Database from CMS.

- In 2013, the 10 percent of hospice decedents with the longest stays (i.e., the 90th percentile) received 246 days or more of hospice care, unchanged from 2012. Before 2013, most growth in hospice length of stay occurred among decedents with the longest stays. Between 2000 and 2012, the 90th percentile in length of stay grew from 141 days to 246 days.

- Short stays in hospice have changed little since 2000. The median length of stay in hospice was 17 days in 2013 and has held steady at 17 or 18 days since 2000. Hospice length of stay at the 25th percentile has remained at five or six days since 2000.

Chart 11-12. Hospice length of stay among decedents, by beneficiary and hospice characteristics, 2013

	Average length of stay (in days)	Length of stay percentiles (in days)		
		10th	50th	90th
Beneficiary				
Diagnosis				
Cancer	53	3	18	129
Neurological	147	3	31	443
Heart/circulatory	81	2	12	236
Debility or adult failure to thrive	116	3	32	336
COPD	113	2	22	335
Other	42	2	6	103
Site of service				
Home	89	4	26	237
Nursing facility	111	3	21	331
Assisted living facility	152	5	51	435
Hospice				
For profit	105	3	21	306
Nonprofit	68	2	14	183
Freestanding	91	2	17	257
Home health based	68	2	15	187
Hospital based	59	2	13	158

Note: COPD (chronic obstructive pulmonary disease). Average length of stay is calculated for Medicare beneficiaries who died in 2013 and used hospice that year, and it reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file data, Medicare Beneficiary Database, Medicare hospice cost reports, and Provider of Services file data from CMS.

- Hospice average length of stay among decedents varies by both beneficiary and provider characteristics. Most of this variation reflects differences in length of stay among patients with the longest stays (i.e., at the 90th percentile). Length of stay varies much less for patients with shorter stays (i.e., at the 10th or 50th percentile).
- Beneficiaries with neurological conditions, COPD, or debility or adult failure to thrive have the longest stays, while beneficiaries with cancer have the shortest stays on average.
- Beneficiaries who receive hospice services in assisted living facilities and nursing facilities have longer stays on average than beneficiaries who receive care at home or in a hospice facility or hospital.
- For-profit and freestanding hospices have longer average lengths of stay than nonprofit and provider-based hospices.

Chart 11-13. More than half of Medicare hospice spending in 2013 was for patients with stays exceeding 180 days

	Medicare hospice spending, 2013 (in billions)
All hospice users in 2013	$15.1
Beneficiaries with LOS > 180 days	8.8
Days 1–180	2.9
Days 181–365	2.8
Days 366+	3.1
Beneficiaries with LOS ≤ 180 days	6.2

Note: LOS (length of stay). LOS reflects the beneficiary's lifetime LOS as of the end of 2013 (or at the time of discharge in 2013 if the beneficiary was not enrolled in hospice at the end of 2013). All spending reflected in the chart occurred only in 2013. Break-out groups do not sum to total because they exclude about $0.1 billion in payments to hospices for physician visits.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file data and the common Medicare enrollment file from CMS.

- In 2013, Medicare hospice spending on patients with stays exceeding 180 days was nearly $9 billion, more than half of all Medicare hospice spending that year.
- About $3.1 billion, or about 20 percent, of Medicare hospice spending in 2013 was on additional hospice care for patients who had already received at least one year of hospice.

Chart 11-14. Hospice aggregate Medicare margins, 2006–2012

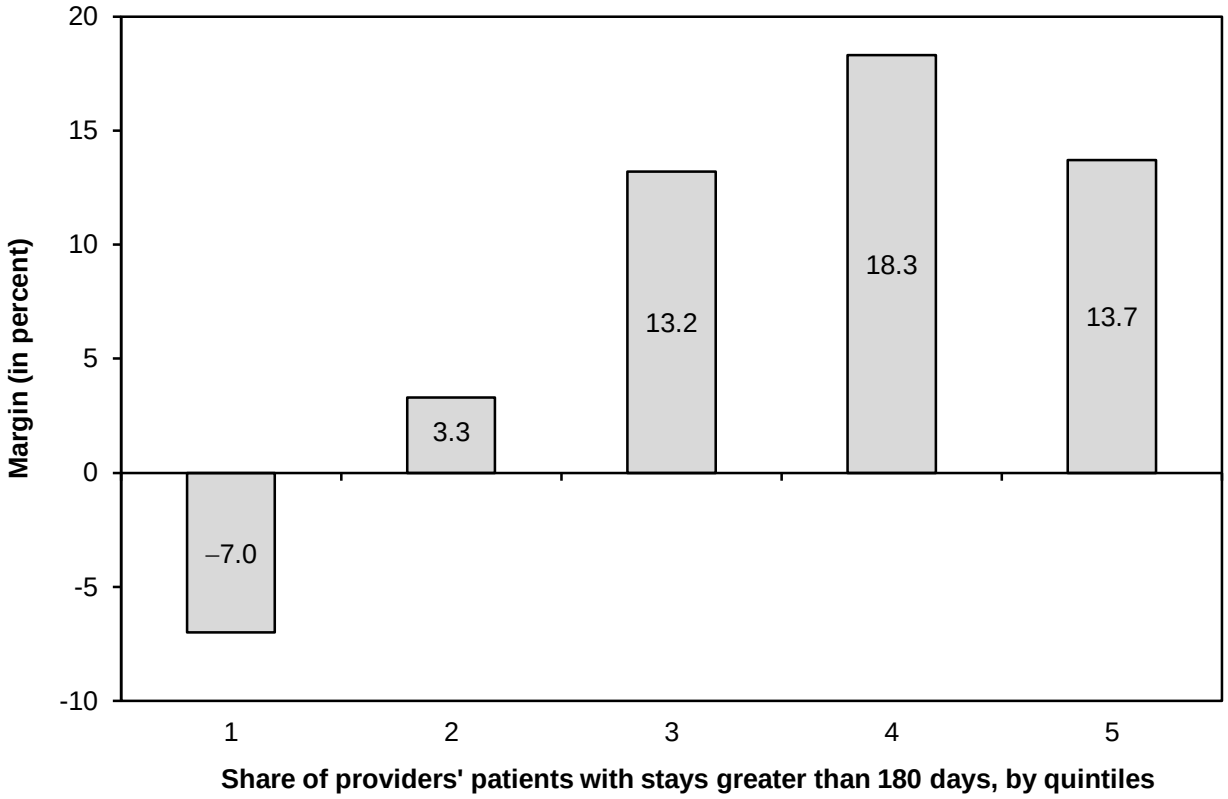
	Share of hospices (2012)	Medicare margin				
		2006	2009	2010	2011	2012
All	100%	6.4%	7.4%	7.4%	8.8%	10.1%
Freestanding	71	9.7	10.2	10.7	11.8	13.3
Home health based	13	3.8	5.9	3.2	6.1	5.5
Hospital based	15	–12.7	–12.2	–16.6	–16.0	-16.8
For profit	59	12.0	11.7	12.3	14.8	15.4
Nonprofit	35	1.5	3.8	3.0	2.4	3.7
Government	6	N/A	N/A	N/A	N/A	N/A
Urban	73	7.1	7.9	7.7	9.1	10.3
Rural	27	0.8	3.7	5.2	6.0	7.8
Below cap	89	7.0	7.9	7.7	9.1	10.4
Above cap	11	0.3	1.4	3.2	4.1	5.2
Above cap (including cap overpayments)	11	20.7	18.3	17.4	18.4	21.3

Note: N/A (not available). Margins for all provider categories exclude overpayments to above-cap hospices, except where specifically indicated. Margins are calculated based on Medicare-allowable, reimbursable costs. Percent of freestanding and provider-based (home health–based and hospital-based) hospices does not sum to 100 percent because skilled nursing facility–based hospices are not broken out separately. Percent of hospices may not sum to 100 percent for other categories due to rounding.

Source: MedPAC analysis of Medicare hospice cost reports, 100 percent hospice claims standard analytic file, and Medicare Provider of Services data from CMS.

- The aggregate Medicare margin was 10.1 percent in 2012, up from 8.8 percent in 2011.
- Margin estimates do not include nonreimbursable costs associated with bereavement services and volunteers (which, if included, would reduce margins by at most 1.4 and 0.3 percentage points, respectively). Margins also do not include the costs and revenues associated with fundraising.
- Freestanding hospices had higher margins than provider-based (home health– and hospital-based) hospices, in part, because of differences in their indirect costs. Provider-based hospices' indirect costs are higher than those of freestanding providers and are likely inflated because of the allocation of overhead from the parent provider.
- In 2012, for-profit hospice margins were strong at 15.4 percent. The aggregate margin for nonprofit hospices was 3.7 percent. The subset of nonprofit hospices that were freestanding had a higher margin, 7.7 percent (not shown in chart).
- Hospices that exceeded the cap (Medicare's aggregate average per beneficiary payment limit) had a margin of more than 21 percent before the return of the cap overpayments.

Chart 11-15. Medicare margins are higher among hospices with more long stays, 2012



Note: Margins exclude overpayments to hospices that exceed the cap on the average annual Medicare payment per beneficiary. Margins are calculated based on Medicare-allowable, reimbursable costs.

Source: MedPAC analysis of Medicare hospice cost reports and 100 percent hospice claims standard analytic file from CMS.

- Medicare's per diem payment system for hospice provides an incentive for longer lengths of stay.
- Hospices with more patients who had stays greater than 180 days generally have higher margins. In 2012, hospices in the lowest length-of-stay quintile had a margin of –7.0 percent compared with an 18.3 percent margin for hospices in the second highest length-of-stay quintile.
- Margins were somewhat lower in the highest length-of-stay quintile (13.7 percent) compared with the second highest quintile (18.3 percent) because some hospices in the highest quintile exceeded Medicare's aggregate payment cap and were required to repay the overage. Hospices exceeding the cap had a margin of more than 21 percent before the return of overpayments (see Chart 11-14).

Chart 11-16. Hospices that exceeded Medicare's annual payment cap, selected years

	2002	2009	2010	2011	2012
Share of hospices exceeding the cap	2.6%	12.5%	10.1%	9.8%	11.0%
Average payments over the cap per hospice exceeding the cap (in thousands)	$470	$485	$426	$424	$510
Payments over the cap as a percent of overall Medicare hospice spending	0.6%	1.7%	1.1%	1.1%	1.4%

Note: The cap year is defined as the period beginning November 1 and ending October 31 of the following year. These estimates of hospices that exceeded the aggregate cap are based on the Commission's analyses. While the estimates are intended to approximate those of the Medicare claims-processing contractors, they are not necessarily identical to the contractors' estimates because of differences in available data and methodology.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file data, Medicare hospice cost reports, Provider of Services file data from CMS, and CMS Providing Data Quickly system. Data on total spending for each fiscal year are from the CMS Office of the Actuary.

- The share of hospices exceeding the aggregate cap increased from 9.8 percent in 2011 to 11 percent in 2012, reversing the trend seen since 2009 of a declining share of hospices exceeding the cap.
- Medicare payments over the cap represented 1.4 percent of total Medicare hospice spending in 2012.
- On average, above-cap hospices exceeded the cap by about $510,000 per provider in 2012, the highest amount since 2006.

Chart 11-17. Length-of-stay and live-discharge rates for above- and below-cap hospices, 2012

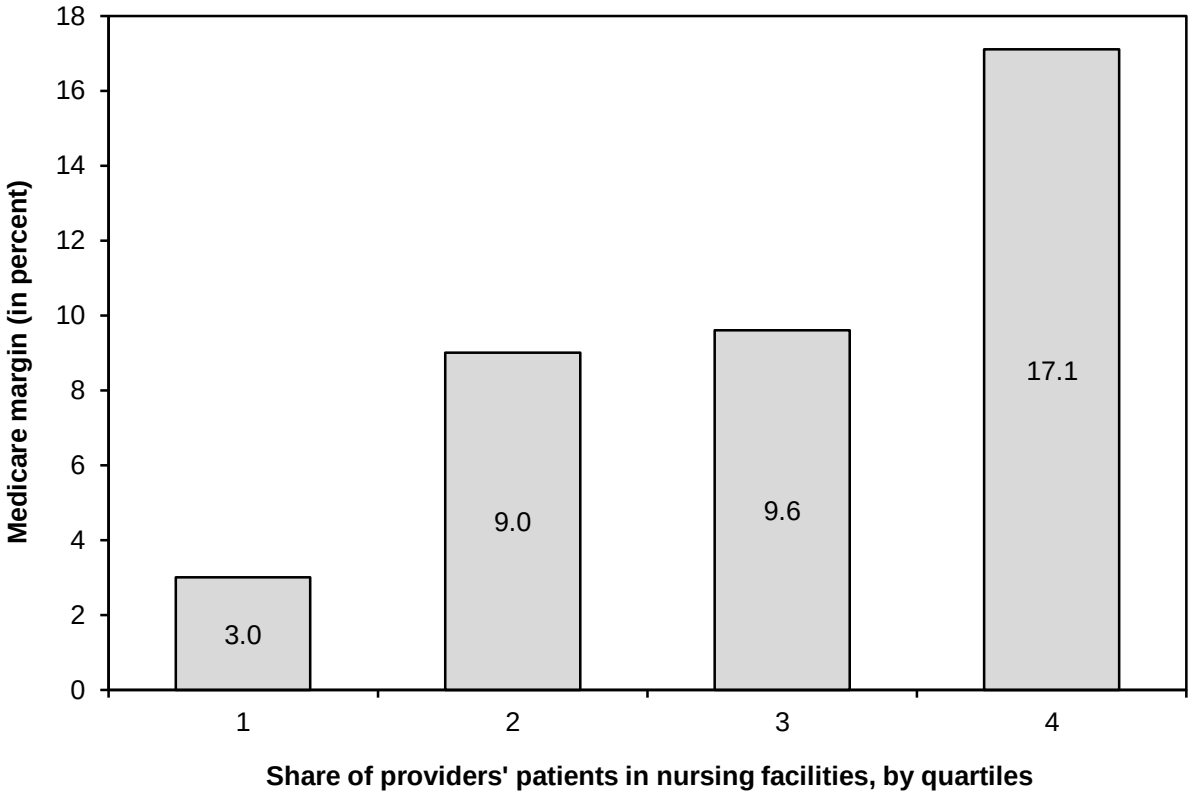
Diagnosis	Share of hospice users with stays exceeding 180 days		Live discharges as a percent of all discharges	
	Above-cap hospices	Below-cap hospices	Above-cap hospices	Below-cap hospices
All	42%	20%	40%	16%
Cancer	18	9	24	11
Neurological conditions	53	33	39	20
Heart/circulatory	45	20	48	17
Debility or adult failure to thrive	42	26	47	23
COPD	46	27	49	22
Other	29	9	36	11

Note: COPD (chronic obstructive pulmonary disease). Length-of-stay data reflect the share of hospice users in 2012 whose hospice length of stay was beyond 180 days. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file and denominator file from CMS.

- Above-cap hospices have substantially more patients with very long stays and more live discharges than below-cap hospices for all diagnoses.
- In 2012, between 42 percent and 53 percent of above-cap hospices' patients with neurological conditions, heart or circulatory conditions, COPD, or debility or adult failure to thrive had stays exceeding 180 days compared with 20 percent to 33 percent at below-cap hospices.
- For all diagnoses, the live-discharge rates at above-cap hospices were at least roughly double, and in some cases triple, the rates at below-cap hospices. For example, among patients with heart or circulatory conditions, 48 percent of discharges at above-cap hospices were live discharges compared with 17 percent at below-cap hospices.

Chart 11-18. Margins are higher among hospices with a greater share of their patients in nursing facilities, 2012

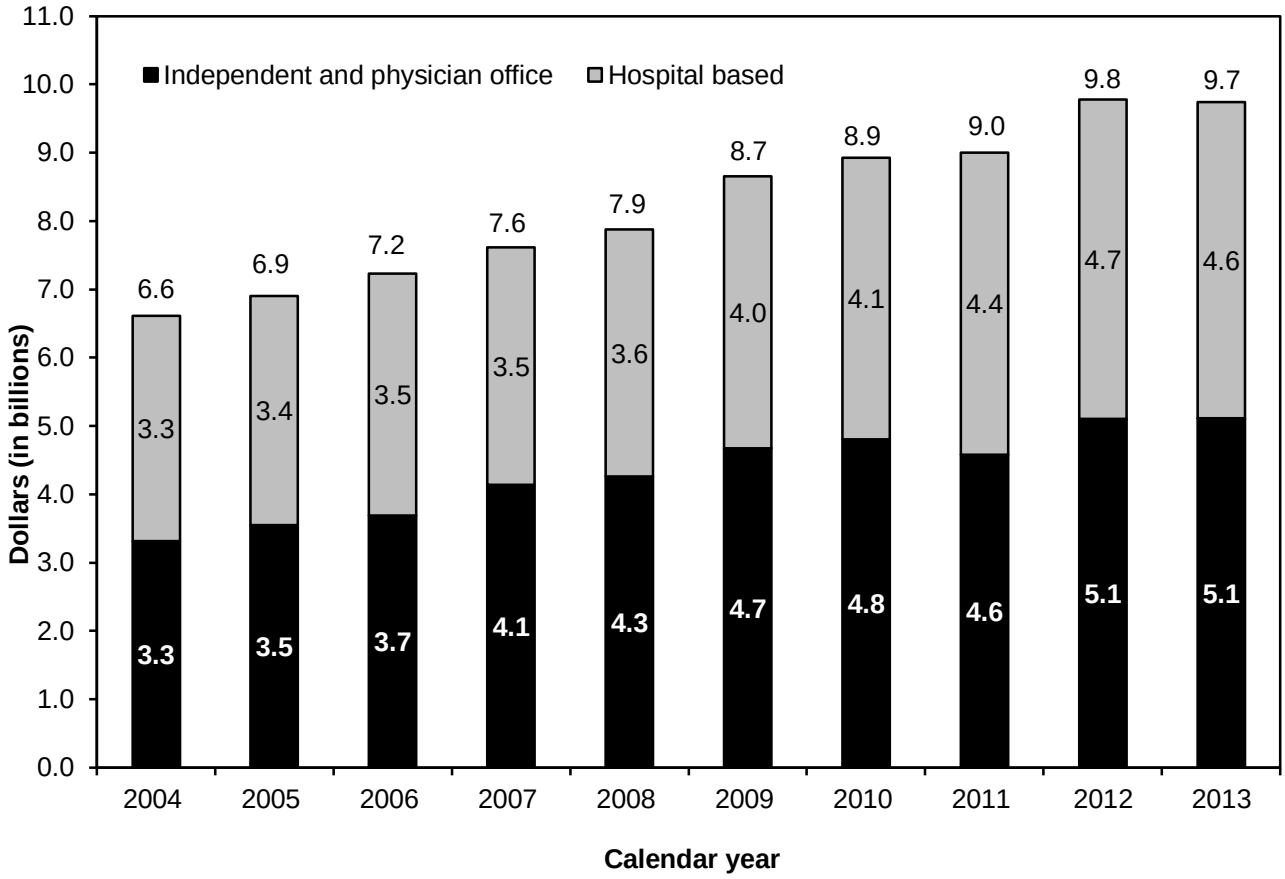


Note: Margins exclude overpayments to hospices that exceed the cap on the average annual Medicare payment per beneficiary. Margins are calculated based on Medicare-allowable, reimbursable costs.

Source: MedPAC analysis of Medicare hospice cost reports and 100 percent hospice claims standard analytic file from CMS.

- Hospices with a large share of their patients in nursing facilities have higher margins than other hospices.
- The higher profitability of hospices serving many nursing facility patients may be due to a combination of factors, such as longer lengths of stay, possible efficiencies in treating patients in a centralized location (e.g., lower mileage costs and less staff time for travel), and overlap in responsibilities between the hospice and the nursing facility.

Chart 11-19. Medicare spending for clinical laboratory services, 2004–2013



Note: Spending is for services paid under the clinical laboratory fee schedule. Hospital-based services are furnished in labs owned or operated by hospitals. Total spending appears on top of each bar. The spending data include only program payments; there is no beneficiary cost sharing for clinical lab services.

Source: **AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2015. THIS CHART REFLECTS DATA FROM THE 2014 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2015 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.**

- Medicare spending for clinical laboratory services grew by an average of 4.4 percent per year between 2004 and 2013. This growth was primarily driven by rising volume since there were very few increases in payment rates during those years.
- Medicare spending for lab services in all settings increased by 8.6 percent in 2012 but held steady in 2013. Clinical lab services accounted for 1.7 percent of total Medicare spending in 2013.
- In 2013, independent and physician-office labs accounted for 52 percent of Medicare spending for all lab services; hospital-based labs accounted for the remaining 48 percent.

MEDPAC Medicare Payment Advisory Commission
425 I Street, NW • Suite 701 • Washington, DC 20001
(202) 220-3700 • Fax: (202) 220-3759 • www.medpac.gov